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History
of
Radiation Health Officers
&
Medical Specialists
Medical Service Corps, U. S. Navy
1947 - 1995

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Preface

In the spring of 1993 in anticipation of the 50th anniversary of the Medical Service Corps, the Chief of the Corps asked each Specialty Section to prepare a history of their Specialty, preferably with pictures, to be combined in a history of the Corps. Captain Mendenhall, MSC, USN, the Radiation Health Specialty Advisor, asked if I would write a history of the Radiation Health Officer and Radiation Specialist communities.

When I was Specialty Advisor, 1985-1991, I had published a short history in our newsletter based on my memory and various stories I had heard over the years. I felt it was important for the junior officers to know their heritage and accomplishments of our community. Once it was published I learned from some of our retired community that the history omitted many important contributions. Hopefully, this will correct much of that.

Preparing a history is no easy task. Records are sparse, pictures are essentially non-existent, memories have faded, and the story is literally world-wide. This says nothing of the problems of formatting and organizing the material. However, the wealth of significant contributions to science, medicine and the Navy is amazing considering the relatively small size of our community. The history is really a compilation of individuals' stories over-laid on the history of the times.

In this vain I have attempted to provide a general overview of the community history, e.g., motivation for the programs, shifts in emphasis, growth in billet structure, development of specific programs, etc. Following this is a list of individuals, who have served in the community or played a significant role, and a brief vignette or anecdote concerning their career. (The more notorious sea stories I have omitted.) Undoubtedly this approach will slight some and their contributions. For this I apologize; no slight is intended; the information simply wasn't available. I hope people will look at this as a living document. Where there are errors or omissions, please make note to the Specialty advisor so we can revise and provide the appropriate recognition.

I found the members of this community to be unique, talented, dedicated professionals. They have made significant contributions to the Navy and society as a whole for which they can take great pride. It has been a pleasure to research their stories.

Respectfully,

J. D. George

CAPT, MSC, USN

RADIATION HEALTH & RADIATION SPECIALISTS

HISTORY, 1947 - 1995

In August 1945 two atomic bombs were dropped on Japan. One week later the Japanese surrendered and shortly thereafter an American team surveyed the bomb effects on Hiroshima and Nagasaki and their citizens. Navy physicians and physicists were among the first Americans into the cities. Testing of this new weapon continued. The fourth atomic bomb was exploded at Bikini on 24 July 1946 as part of Operation Crossroads. It was the first test of the atomic bomb against ships. A new type of specialist was needed to understand the effects of radiation and ensure personnel involved in these tests were protected from the effects of this new weapon. At the same time, peaceful uses were being sought for the use of radioactive material. From this background was born the "Radiation Safety Officer" and "Radiation Specialist."

When the Medical Service Corps was formed in 1947, LCDR Horace Chester Dudley, LCDR Francis William Chambers, LT Thomas E. Shea, Jr, LT Royce Skow and LT Robert Louis Gade were the first "Radiation Safety" and "Radiation Specialist" officers commissioned and are part of the original 251 "Plank-owners" and original 55 science officers. Their primary duties were to provide radiation safety and radiation biology support for the nuclear weapons testing program. They were uniquely qualified by their training and experience for these tasks.

During the early 1950's the Radiation Specialists continued to be primarily associated with the biological effects of atomic weapons development. In the mid and later 1950s they were intimately involved in the development of radiation control practices for the fledgling submarine nuclear reactors program and with clinical applications of radioisotopes. Radiation specialists performed bio-effects research, provided radiation safety supervision and training, and supervised work at the test sites, Naval Radiological Defense Laboratory and a few other locations.

In the 1949 to 1953 time frame, target ships were brought to Pearl Harbor, Puget Sound, Hunter's Point, San Francisco and San Francisco Bay Naval Shipyards for damage assessment and further decontamination. (Initial decontamination was performed at the test site in the Pacific.) Radiation Specialists supervised the decontamination and tested various methods of decontamination. In 1951, the first medical physicist reported to a hospital (Tom Mitchel, St Albans), the second one in 1952 (Marty Colodsin, Bethesda).

LCDR Chambers provided technical support to the nuclear weapons testing program, directed the Radiation Technology Division at Naval Medical Research Institute doing radiobiology research, and performed x-ray machine safety and performance surveys for hospitals on the East coast. LT Skow supervised decontamination of nuclear weapons target ships and was an assistant to ADM Rickover for Naval Nuclear Propulsion's radiation safety program (set-up Rickover's initial RadCon Program). LCDR Dudley researched the bio-chemical properties of gallium, in support of liquid metal heat transfer research being performed at Oak Ridge for nuclear reactors, and identified that carrier-free gallium could be used as a soft tissue nuclear medicine imaging agent. LT Gade, a chemist, served several tours as an industrial hygienist, radiation safety officer at the submarine research laboratory and as a contracting officer at the Defense Atomic Support Agency.

In the late 1950s and early 1960s radiation specialists were stationed primarily at one of four activities where radiobiology research or nuclear medicine work was being performed. These included the Radiation Technology Division at Naval Medical Research Institute, Bethesda; Radiology Department of Naval Hospital Saint Albans; Radiology Department at Naval Hospital Bethesda (Naval Hospital and Naval Medical School); and, the Naval Radiological Defense Laboratory in San Francisco.

By 1960, according to the first newsletter, there were 23 in-service billets; and, 5 officers were in out-service training. The billets were located: 3 at Naval Medical Research Institute; 3 at Naval Hospital, Bethesda; 3 at Naval Medical School Bethesda; 2 at Naval Hospital, St Albans; 2 at Naval Radiological Defense Laboratory; 2 at Defense Atomic Support Agency (DASA, the parent of today's Defense Nuclear Agency); and single billets at the Army's Chemical Warfare Defense School in Ft McClellan Alabama; Naval Medical Research Laboratory, New London; Office of Naval Research, London; and Naval School Command, Treasure Island. The officers represented 11 sub-specialties: 0818, 0816, 0828, 0836, 0840, 0842, 0844, 0864, 0866, 0867 and 0886. By 1970 the sub-specialties were consolidated or limited to four: Biophysicist, 0838; Radiation Physicist, 0842; Radiation Biologist, 0844; and Radiation Health Officer, 0886.

The Radiation Technology Division at Naval Medical Research Institute (NMRI) was the earliest center for direction of radiation health and radiation medicine related activities. The first specialty adviser, LCDR Chambers, coordinated the program out of that Division. The Division performed basic radiobiology research and coordinated some of the early bio-medical support for the atmospheric testing in the Pacific. Individuals were detailed from NMRI to provide radiation health and monitoring support for various nuclear weapons tests.

In addition, the NMRI lab had two high voltage x-ray machines and a cobalt-60 exposure building for conducting radiation effects experiments on large and small animals. The cobalt-60 exposure building eventually became contaminated with cobalt-60. Cobalt-60 capsules traveled in pneumatic tubes between the two exposure rooms. Through use, the cladding wore off the capsules and then cobalt-60 began to wear off and contaminate the pneumatic tube. The pneumatic tube vented into the control room and eventually contaminated the control room before being discovered. (Bill Beckner discovered the contamination on the neck tie of one of the Chiefs while doing a thyroid scan.)

The Naval Medical School investigated various radiation applications for medical use. When Naval Hospital Bethesda installed a reactor in about 1957 to make radiopharmaceuticals the nuclear medicine development work was transferred to the hospital. With the opening of the Naval Radiological Defense Laboratory in San Francisco most of the animal exposure work in support of basic weapons effect research was transferred to San Francisco.

Naval Hospital Saint Albans was the primary cancer treatment center for the Navy on the East coast in the 1950s and 60s. It had a large "Atomic Medicine" department employing several radiation specialists. The department was originally designed to include a Radon Factory. However, this was preempted by the development of "Atomic Medicine", i.e., the use of other isotopes for medical purposes.

Naval Hospital Bethesda was one of two or three developmental laboratories in the United States for nuclear medicine. Captain E. Richard King, MC, USN, Chief of Radiology, was very active in exploring the medical uses of atomic power. A five watt nuclear reactor was installed at Bethesda to produce radioisotopes for medical uses. (The first active duty Navy people licensed as reactor operators were radioisotope technicians for the operation of this reactor, Earl Scrom and Bill Murrell.)

The history of the reactor is worth noting. As the story goes, Surgeon General Hogan and ex-Secretary of the Navy Trimble were golfing buddies. Trimble was working for Aero-jet General Reactors and convinced Adm Hogan he needed a reactor to make radiopharmaceuticals. The original reactor offered was a 5 milliwatt unit. Tom Mitchel and Dr. King said the reactor was too small, they needed at least a 5 watt unit. Aero-jet just added more concrete shielding and more fuel and their 5 milliwatt reactor became a 5 watt reactor. This was the "hayday" of the development of nuclear medicine. Isotopes could be made in the building immediately next to the clinic. Considerable research was performed developing short half-life radiopharmaceuticals, detection and imaging systems, and treatment protocols.)

In 1952, Captain E. Richard King, MC, USN started a Radioisotope Course for technicians. The course included 3 months training in inorganic chemistry and four months in isotope techniques and radiation safety. The course was designed to train corpsmen to assist physicians with diagnostic testing and treating patients by use of isotopes. From 1952 through 1956 all nuclear submarine corpsmen attended the course prior to assignment to a submarine. It was the only training program available for corpsman giving some background in reactor operation, monitoring instrumentation and radiation effects. In 1956 a program for training nuclear submarine corpsmen was established at New London. The Bethesda course then concentrated on training radioisotope, or, as they came to be called, nuclear medicine technicians.

In 1957 or 1958, Captain King started a Nuclear Medicine Course for Physicians who were to be assigned to nuclear submarines or had an interest in "atomic medicine". Many went on to complete residencies in radiology or nuclear medicine. Graduates of the course constitute a virtual Who's Who in Radiology and Nuclear Medicine throughout the United States, including many past presidents of the Radiological Society of North America and the Nuclear Medicine Society. (The course of 200 hours was the model for the physician and radiation safety training requirements published in Title 10, Part 35, CFR for medical users of isotopes.) The course continues to this day, managed by Radiation Specialists assigned to the Nuclear Medicine Department, National Naval Medical Center.

Bethesda also supported and maintained an emergency fly-away team up through the 60s to respond to nuclear related emergencies or accidents. (PLUCON teams, Beckner, Scrom, Murrell and Dr. Gralton were the first ones.)

With further development of the nuclear submarine fleet a Radiation Effects Evaluation Laboratory was added to the facilities at Bethesda. The Laboratory was a two story building containing a whole body counting and decontamination facility on the lower level and an open bay ward on the upper. The ward was large enough to hold the crew of a submarine. Should there be an accident and the reactor vent into the submarine, the plan was to fly the crew to Bethesda for evaluation, treatment and care. The ward was never used. In the 1960s the ward was converted to an endocrinology laboratory. In 1979, with the construction of the new hospital, the Laboratory was torn down; however the whole body counting facilities were retained and are now located in a small facility on the lower level of the Outpatient parking garage.

The Naval Radiological Defense Laboratory in San Francisco employed several thousand people who performed research and provided support for the nuclear weapons testing at the Nevada and Pacific test sites. The lab provided personnel for experiments at the tests and decontamination of the target ships. The laboratory opened in 1946 and

closed in 1969. The biological and weapons effect research work was transferred to the Armed Forces Radiobiology Research Institute in Bethesda, Maryland.

The Armed Forces Radiobiology Research Institute (AFRRI) was chartered in 1961 as a Joint Service Organization under the Defense Nuclear Agency. Its purpose was to bring together the best talents of the Army, Navy and Air Force with a skilled cadre of civilians. They comprise what is now the largest single radiobiology program in the United States.

Radiation Specialists in the 1950-60 time-frame had science degrees upon entry and were sent to the Navy Post Graduate School at Monterey for training in atomic physics and then to the Nevada Test Site for weapons effects training. This group included: Bob Jordan, Howard Dowling, Jim McIlraith, and Dick Garver.

The Radiation Safety Officer community for the submarine tenders began in 1960. (Tenders had photodosimetry programs prior to the submarine program for support of the medical and dental x-ray radiation monitoring program. These were managed by Warrant Officers or Supply and Administration Medical Service Corps Officers.) Originally the Radiation Safety Officer was the "Rad Con Officer" and worked for the Repair Officer. (The radiation safety officer had the technical experience to support the nuclear submarine repair work.)

In about 1964, the radiation safety officer billet was transferred from repair to the medical department. It was felt to be more appropriate to report to the physician since the purpose was to protect the health of the workers. This placed the responsibility more in line with the commercial and academic activities. Also, it maintained an independent oversight role for the radiation safety officer.

The first submarine tender Radiation Safety Officers were ex-radioisotope technicians (Earl Scrom, Bill Beckner, and Bill Murrell) who were commissioned to fill the tender billets. (Clyde Hensely was also commissioned under this program but never switched from Health Care Administration to Radiation Safety.) These individuals were the first non-degree people to be commissioned in the Health Science section of the Medical Service Corps. This program lasted about four years then all were required to have at least a Bachelors degree prior to commissioning as radiation health officers. In 1964 radiation health officers who were still classified as Health Care Administration and did not have a degree were limited to one tour in the radiation program unless they were within a few hours of a degree. (Bill Murrell was an exception to this policy.)

There were several out-service training programs to prepare individuals for the radiation program. One procurement program recruited individuals, primarily ex-enlisted men, sent them to Reed College in Oregon and then to six months training at the Nevada test site. Individuals entering this way included Charles Tedford, George Douglass and Gordon Werner. A group of pharmacists were also recruited to become radiation safety officers. The pharmacists could transfer to the Radiation Health Section and would be sent for a Masters Degree in radiobiology at University of Rochester. (Submarine Medical Officers were also sent for a Masters degree in radiobiology at Rochester.) Individuals entering the program this way included: Jim Spahn, Bob George, Bill Kolb, Bob Reed and Jim Duckworth. Bob Will also went to Reed College but before the special radiation control course was developed.

Officer's entering the program in the late 60s and through the 70s and 80s had to have a science degree prior to entry. In the 1960's officers went to OCS then were commissioned. In the late 60s, officers were commissioned prior to reporting and went to indoctrination school (5 weeks) at Bethesda. Officers entering in the late 60s were sent to the radiation safety office at Bethesda for their health physics and dosimetry training. Constructive credit was given for prior graduate education beginning in 1967, LTjgs NG and Sallee were the first to receive credit. In 1970 officers were sent to Balston Spa, the nuclear prototype for training Line and Medical officers. Ray Chaput and Ken Groves were among the first to be trained at Balston Spa. In 1976 the radiation health training program for physicians and radiation safety officers was moved from Balston Spa to the Naval Undersea Medical Institute, New London.

In the late 1940s and early 1950s the radiation programs were managed by the Radiation Technology Division at NMRI. In 1955-56 the function was moved to BUMED. At BUMED there was the Special Weapons Defense Division (Code 74) with a Radiological Safety Branch, and Biological and Chemical Warfare Defense Branch; and the Submarine Medicine Division (Code 75). In 1963 the Special Weapons Defense Division and the Submarine Medicine Divisions were combined as the Submarine and Radiation Medicine Division, Code 74 with three Branches: Submarine Medicine, Submarine Personnel Branch, Radiation Safety and Photodosimetry (Photodosimetry Branch was located at Radiation Safety, Bethesda (CAPT Skow)). The Biological and Chemical Warfare Defense Branch was maintained as a separate BUMED Division but assignment to it was made by Code 74. Although its name has changed several times, Code 3C, Code 532 (1976), Code 21 (1985), Code 3C1 (1990), and back to Code 21 (1991) the basic organization and function has remained the same since 1967.

Part of the duties of the radiation safety officer was to monitor and control exposure received by those working with radiation sources. At high exposure levels ionizing radiation has been shown to be a mild carcinogen. National and International

scientific bodies recommended exposure limits to ensure the risk from working with radiation sources is no greater than other risks in the work place. The recommendations recognized that accidents may happen but stated that management should not deliberately plan under normal working conditions for these limits to be exceeded. These limits were incorporated into the Federal Code of Regulations as Public Law. The Navy in turn published these as Navy regulations. In some cases making the limits or control levels more restrictive. In this way, if the Navy requirements were met the public law was met. If Navy requirements were slightly exceeded there was a buffer zone before the requirements of the public law were exceeded.

Since 1947 the Navy has been monitoring personnel for occupational exposure to ionizing radiation to ensure personnel do not exceed the recommended exposure limits and to reduce exposure as much as possible. The Navy's first whole body personnel dosimeter was the film badge. The stainless steel film badge was the Navy's only dosimeter until 1973 and remained in use until 1987. During this tenure, the basic film badge was not changed (an accident dosimeter of indium foils and sulfur pellet was added); however, several types of film were used as technology improved. The initial film badge was issued with Eastman radiatized DF-7 dosimetry film; subsequent film types were industrial type 7 film in 1951, DuPont type 552 film in 1957, Dupont type SX-222 in 1964, Kodak Type III film in 1969. NTA film for neutron monitoring was used beginning in 1964.

In 1973 the Calcium Fluoride thermoluminescent dosimeter (CaF_2 TLD) was introduced to monitor for gamma exposure in the Nuclear Reactors Program. Soon after, in 1975, the Bureau of Medicine and Surgery introduced a two-chip Lithium Fluoride ($\text{Li}^6\text{F}/\text{Li}^7\text{F}$) TLD for both gamma and neutron personnel dosimetry. Following introduction of the Lithium Fluoride TLD in 1982 the use of Kodak NTA film for neutron dosimetry was discontinued. Film badges were still used for medical and dental x-ray personnel dosimetry.

In 1987 the Bureau of Medicine and Surgery replaced the film badge and the two-chip LiF TLD with a four chip LiF TLD badge. This new dosimeter is capable of monitoring for beta, photon and neutron irradiation and has passed accreditation by the National Voluntary Laboratory Accreditation Program (NVLAP) three times in all eight test categories. (The Navy film badge was the first government system accredited by the NVLAP program upon its initiation in 1985.)

From 1947 to 1968 dosimetry film was issued and processed at the local activity, including all nuclear submarines and ships with medical x-ray machines. In 1968 the Bureau of Medicine and Surgery established a centralized processing facility for dosimetry film and later LiF dosimeters within the radiation safety department of Naval

Hospital Bethesda. The facility has undergone many name changes since its inception concurrent with changes in the organizational structure of the Naval Hospital and National Naval Medical Center. In addition, with the construction of the new hospital it moved (1975) from the old temporary WWII structure in back of the hospital to the old Navy Exchange Building (Bldg 144), to the 6th floor of the Tower (1982) to its present location (1986) on the 4th floor of building 4-6. In 1991 the Center was established as a Detachment of the Navy Environmental Health Center, Norfolk, Virginia. In 1991 through 1993 the Center processed over 35,000 dosimeters per month.

The Dosimetry Center also maintains the Navy's Automated Radiation Exposure Registry which contains the exposure histories of all personnel monitored for exposure to Navy controlled radiation sources since 1947. This function was taken over from BUMED in about 1983 or 1984. The database contains over 2.38 million individual exposure records (about 600,000 individuals) and occupies over 560 megabytes of computer information. The database is routinely used to provide exposure histories for individuals seeking employment in the civilian nuclear industry, seeking workman's compensation or benefits from the Veteran's Administration, and for epidemiology studies.

In the 50s the billets were located at Saint Albans Naval Hospital, Naval Medical Research Institute, Naval Hospital Bethesda, Naval Medical School and Naval Radiological Defense Laboratory. In the 60s approximately 18 sea-duty billets were added to support the submarine tenders; 4 billets, for teaching NBC warfare defense; and, 5 billets at Naval Hospitals for a total community of about 64 billets. In 1974 a block of 14 billets were added as part of an occupational health billet buy. These billets were distributed to smaller hospitals (Pensacola, Groton, Orlando, Bremerton, New London, Charleston) as Radiation Safety Officers, and other facilities as a second or third billet to strengthen the respective staffs (Great Lakes, Oakland, Radiation Safety Bethesda, Portsmouth, Navy Environmental Health Center, and San Diego). In the late 70s and 80s about 10 more billets were added, usually one at a time, (three were nuclear aircraft carrier billets which after one tour reverted back to administrative officers), for a total of about 88 billets in 1991. The community growth is summarized in the table below:

<u>Year</u>	<u>Billets</u>	<u>Year</u>	<u>Billets</u>
1947	4	1960	24
1949	7	1963	31
1950	8	1964	32
1951	9	1967	49
1953	13	1968	50
1954	19	1969	51
1955	19	1970	51
1956	20	1975	55
1957	22	1981	78
1958	24	1985	75
1959	24	1990	93

The Navy has been the leader in the development of radiation safety. Its use of radiation has expanded from a few hundred people being monitored for occupational exposure in 1947 to over 104,000 in 1992. The successful and safe operation of the US Navy's nuclear fleet, nuclear weapons program as well as the pre-eminence of the Navy's nuclear medicine programs are due in part to the contributions made by members of the Radiation Health and Radiation Specialists community. Navy radiation safety programs have clearly been the model for others to emulate.

RADIATION SAFETY OFFICERS/RADIATION SPECIALISTS

The following lists individuals who were commissioned in the Medical service Corps as nuclear specialist officers, i.e., radiochemistry, biophysics, radiophysics, radiobiology, radiation safety and radiation health and a few others who served as Radiation Health Officers.

The synopses and anecdotal information gives some idea of the training, expertise, duty stations, rotation patterns, personalities and accomplishments of the various members. The year listed in the left hand column is the year the individuals appear to have been commissioned as Medical Service Corps Officers (first appearance as Medical Service Corps Officers in the Registry of Naval Officers). The degrees and certifications are those currently held. The rotation dates and duty stations given were compiled from newsletters, exposure periods in the Navy exposure history data base and compared with information provided from members that could still be located.

Undoubtedly there are individuals, contributions and notes of interest that are not mentioned and, in some cases, the dates are only close at best. The intent is to reconstruct a brief synopsis of the record of those that served as a radiation health or radiation specialists, provide some information recognizing their service and document specific events in the program.

1947 Horace C. Dudley MSC Plank-owner. PhD Bio-chemist, Georgetown. Originally commissioned into the Army in the Chemical Corps. When the Germans did not use chemical weapons during their retreat from North Africa, 1942, he decided the Germans were unlikely to use chemical weapons in the war and transferred to the Navy as an ordinance officer with the Line. Part of his duties involved teaching safety methods with radiation. He rose to the rank of Commander, was the Commanding Officer of the Ammunition Depot, New Hebrides, largest magazine west of Pearl Harbor. In 1946 he was in charge of the Weapons Ordnance Group for the Bikini Tests (Crossroads Series), performed damage assessment of the target ships. Retired from the Navy and applied for a civilian position at Naval Medical Research Institute. Was told about the plans for formation of the new Corps and encouraged to join by Andrew P. Webster. (Webster was specialist in a lot of different things from Johns Hopkins. Had excellent access and support from the Surgeon General.) Switched from Line (18 years of service) to join. Was commissioned into the Hospital Corps January 1947 and waited there until September 1947 when the new Corps was formed. Was commissioned into the Medical Service Corps as a Commander. One of 55

science officers commissioned into the Corps. Was Head of the Science section of the Corps 1950-52. First Radiation Specialist selected to O-6. Seventh Medical Service Corps Officer selected to O-6. Chief of Bio-chemistry Division at NMRI. (Laboratory across the hall from Drs Cronkite and Bond who did medical and radiation effects assessment of Marshall Island Natives.) Asked to document all bio-chemistry of gallium which was being studied at Oak Ridge National Laboratory as the heat transfer medium for the reactor plant. Discovered carrier free gallium-72 localized in soft tissue and could be used as therapeutic or soft tissue imaging agent. Was at Naval Shipyard San Francisco deconning atmospheric test target ships in 1950. He was transferred to Naval Hospital Saint Albans, the Navy's primary cancer hospital on the east coast, 1952-62. Retired 1962, University of Southern Mississippi, 1962-1969, University of Illinois Medical School, 1969-1977. Now living in Hinsdale, IL.

- 1947 Bill Chambers MSC Plank-owner. First Specialty Advisor. Certified in X-Ray and Gamma Physics. Graduate from Columbia University, studied under Fiallia. Director, NMRI Radiation Technology Division. Circuit riding physicist, surveyed x-ray machines up and down east coast, 1949-60. Published Radiological Safety Regulations, NAVMED P-1325 (Revised), and Photodosimetry Manual, NAVMED P-5005. Involved in biomedical support for special (nuclear) weapons tests: Crossroads, 1946; Buster-Jangle, 1951; Greenhouse 1951; Tumbler-Snapper, 1952; Upshot-Knothole, 1953; Redwing, 1956; Hardtack I and II, 1958; Plowshare, 1961; and Dominic, 1962. Participated in deconning target ships at Naval Shipyard San Francisco, 1958. Stationed at Naval Hospital Bethesda 1960-63. Was the main planner for Armed Forces Radiobiology Research Institute. First Deputy Director for AFRRI when lab was opened. Retired, instrumental in the Georgia Tech Nuclear Engineering program, later went to the faculty at Emory University. Deceased.
- 1947 Tom Shea MSC Plank-owner. Significant experience with the atmospheric tests in the Pacific. Officer In Charge of the Medical Reactor at Bethesda in 1957-1960. Retired to be Radiation Safety Officer for the University of Maryland. Deceased.
- 1947 Royce Skow MSC Plank-owner. Physiologist. Provided bio-medical support for atmospheric nuclear tests: Crossroads (Bikini Atoll), 1946; and Greenhouse, 1951. Decontaminated atomic test target ships at Naval Shipyards Puget Sound, San Francisco, and San Francisco Bay, post-Crossroads, 1946-50. Assistant to ADM Rickover for setting up Radiation Controls for the Naval Nuclear Propulsion program, 1954-1957. He identified radioactive fallout in Alaska as coming from a Russian atomic-bomb test while US intelligence

agencies were claiming and President Truman announced that the Russians could not develop a bomb for at least 5 years. First Radiation Safety Officer at Naval Hospital Bethesda, assigned 1957-1969. First assigned as radiation safety officer for the medical research reactor, attached to Naval Medical School. Produced a nuclear medicine safety film selected to be shown at the Paris Film Festival. The film was a classic, the first of its kind. Was responsible for calibration and quality control of Navy Dosimetry film, 1957-1969. Retired 1969. Deceased 1991.

- 1947 Robert L. Gade MSC Plank-owner, BS Reed College, chemistry. Chemist at Reynolds Metals Company, Longview, Washington 1941-1942. Commissioned May 1942 as Volunteer Reserve for Medical Corps duty. Stationed at Puget Sound Navy Yard as Industrial Hygienist, 1942-1945; Maritime Commission, Philadelphia, Pennsylvania as Health Consultant, 1945; Puget Sound Naval Shipyard, Industrial Hygienist, 1945-1947; commissioned Regular Navy, Medical Service Corps, 1947. Tours include Puget Sound Naval Shipyard, industrial hygienist, 1947-1949; Charleston Naval Shipyard, industrial hygienist, 1950-1952; New York Naval Shipyard, industrial hygienist, 1952-1955; Reed College Radiation Safety course with Jim McIlraith (and Dr. Dick Dobbins, first medical officer on the SEAWOLF), 1955-1956; Naval Medical Research Laboratory, New London, Radiation Health Officer, 1956-1963; Defense Atomic Support Agency, Radiation Bio-effects Officer and Contract Administrator, 1963-1965; Naval Air Station Pensacola, industrial hygienist, 1965-1967.
- 1948 Jasper Morgan Certified Radiological Physicist, 1952. PhD Physics upon entry (BS Wake Forest, Physics & Chemistry; MA University of Michigan, Physics & Electrical Engineering; PhD Duke, Physics & Math). Previous Instructor in Radiology at Duke University, 1935-1941. Received appointment as LTjg, H-S, USNR. Stationed at Experimental Diving Unit, Washington D.C., 1941-47. Commissioned into Medical Service Corps 1947. Stationed as Instructor, Naval Medical School, NNMC, 1947-1949, NMRI 1950-1957. Founded the Radiation Technology Division at NMRI. First Navy medical physicist. Taught in the Radioisotopes Technician Course. TAD NRDL 1953, involved in the Naval Shipyard San Francisco decontamination of target ships from the Pacific. Transferred to Naval Hospital San Diego 1957-1958.
- 1948 Bob Will Specialty Advisor, 1962-65. Pharmacy background. Held commission of Lieutenant, 1949. Radiation training at Reed College. Ordained minister. Provided bio-medical support for nuclear weapons atmospheric tests: Hardtack I, 1958. Published original Radiation Health Protection Manual, NAVMED P-5055, compiled guidance in Photodosimetry Manual and Radiological Safety Regulations. Started the Radiation Health Officer

Newsletters. Retired 1965 to be Radiation Safety Officer, University of Maryland (relieved Shea), later State Radiation Health Program Director for Kansas and then for Washington. Deceased, 1988.

- 1948 Leonard J. Bodenlos Prior Line Officer. Bio-chemist. Instructor (Ammunition Packager) Naval Training School, Higham Massachusetts, 1943; U. S. Naval Ammunition Depot, Higham, Massachusetts 1944; Bureau of Ordinance Unit Edgewood Arsenal, 1944-1945; Dugway Proving Ground 1945-1946. Civilian 1946-48. Commission into MSC, 1948, assigned Navy Medical Field Research Laboratory, Camp Lejeune, 1948-1951; Army Medical Research Laboratory, Fort Knox Kentucky, 1951-1952 (Established temporary cold weather lab at Osaka, Japan Oct 51 to June 52); NMRI 1952-54; US Naval Unit, Army Chemical Corps School, Ft McClellan, 1954-1958; and, Naval Medical Research Institute 1958-1964. Last Officer in the Radiation Technology Division. Responsible for the successful removal of the Cobalt 60 dust (about 25 Curies) from the pneumatic system of the irradiator, building 150 and the environs. Developed techniques for detecting and evaluating levels of trace environmental contaminants in animals and humans. Work was in support of atmosphere control for FBM submarines.
- 1949 Gordon Bell Second Specialty Advisor, 1955-1962. First Specialty Advisor at BUMED. Chemist. Held commission of Lieutenant 1950. Provided bio-medical support for nuclear weapons atmospheric tests: Castle, 1954; established commissioning program for Radioisotope Technicians to become Radiation Health Officers. Responsible for procurement of funding from Defense Atomic Support Agency for trainees in radiation biology at University of Rochester. Transferred to Bethesda 1962 and worked in the Radiation Effects Evaluation Laboratory.
- 1950 Bob Sharp Commissioned as an Ensign 1950. Worked with the nuclear weapons atmospheric testing in the Pacific: Buster-Jangle, 1951; Tumbler-Snapper, 1952; Upshot-Knothole, 1953; Castle, 1954 (medical survey of Marshall Island Natives); and Teapot, 1955. Worked on the nuclear reactor at Naval Hospital Bethesda 1961-67. Taught in the Nuclear Medicine Course for Physicians. Performed research at AFRRI. Very athletic, swam 20 miles a day. Now living in Del Mar, CA and works for General Atomic in San Diego. (619) 755-4557.
- 1951 Thomas G. Mitchell Certified Medical Nuclear Physicist. Assigned to St. Albans in 1951 as a Chemist. St. Albans was supposed to start a Radon factory, but project was canceled in favor of developing Atomic Medicine. Set up first Nuclear Medicine Clinic in Egypt, Dimirdash Hospital, 1954-55. University of

Rochester, 1956. Assigned to Naval Hospital Bethesda 1957-1960. Taught in the Nuclear Medicine Course for Physicians. (Dr. Antonio Alerhto a graduate of the Nuclear Medicine Course and two Navy technicians (Schultz and Konwinski, TAD from the Navy) set up the first Nuclear Medicine clinic in Argentina.) Received PhD at Georgetown, 1960-63. Collaborated with Dr. Behrens on book, "Atomic Medicine". First Radiation Specialist assigned to NMRU-2, Taipei, 1963-65. Stationed Naval Hospital Bethesda, 1966-69. Retired 1969, faculty member at Georgetown and John Hopkins. Living in Calvert, MD.

- 1951 Bob Jordan Physicist, MS Originally at Camp Lejeune doing explosives research. Entered program 1951. Naval Post-graduate School, Monterey, Nuclear Engineering. Stationed at NRDL 1953-54. Provided biomedical support for nuclear weapon atmospheric tests: Castle 1954. Stationed at Dirmadish Hospital 1954 (relieved Tom Mitchel), Naval Hospital Bethesda 1960-64, Naval Radiological Defense Laboratory 1966-68, and Naval Hospital Oakland 1970 to 78. Relieved Tom Mitchell at Dimirdash Hospital in Egypt. Relieved Bob Sharp at Naval Hospital Bethesda as radiation safety officer for the nuclear reactor. Medical Physicist at Oakland Naval Hospital. Deceased, 1991.
- 1951 Howard Dowling Specialty Advisor, 1972-74. Chemist. Entered radiation health program 1951, prior gunners mate. Sent to Post Graduate School Monterey, M.S. Nuclear Engineering. Completed academic requirements toward Board Certification under Jim McIlraith in San Diego in 1964. Medical Physicist, reactor officer at Naval Hospital Bethesda, 1958-1970. Traveled up and down east coast surveying x-ray machines. Started the BUMED radiation health inspections at the Naval Shipyards (1973). Retired and deceased, 1974. (Death resulted from a fall from a ladder within a few months after he retired.)
- 1952 Marty Colodzin First Medical Service Corps Physicist assigned to Naval Hospital Bethesda, 1952-55. Naval ROTC Officer, Cal Berkley in Physics with one year graduate studies at Tufts. Heard the Navy Medical Department was looking for a physicist, wrote BUPERs and was accepted. Dr. E. Richard King wanted a physicist to help him set up a nuclear medicine program. Entered program 1952. Worked with Drs. Luther Brady, Bill Looney and Ben Duffey. Performed thyroid uptakes with I-131 using geiger mueller counters. Did blood volumes using Cr-51. Developed instrumentation and evaluated thoratrast residual in a number of patients. Measured glucose metabolism in rat livers with doctors in chemistry division. Developed some scintillation instruments to use in the laboratory. Was to go to Egypt in 1954 with Dr Looney to set up a nuclear medicine clinic. An Egyptian opera star, Um Kelsum (sp?) had Graves Disease. Surgeons were concerned during surgery they may cut a nerve ending her career.

She was treated successfully at Bethesda with iodine-131 instead of surgery. Egyptian Ambassador impressed and wanted a Nuclear Medicine Laboratory set up in Egypt. State Department stopped processing LT Colodzin's passport because he was Jewish, said dissidents in the government would cause trouble. Tom Mitchell was sent instead, attached to NMRU-3. Set up clinic in Dimirdash Hospital. First Nuclear Medicine Clinic in Egypt. Marty Colodzin was accepted to medical school in 1955. Now practicing Psychiatry in Bethesda.

- 1952 Bill Chapman Entered program 1951 or 52. Commissioned as LTjg 1953. Stationed at Naval Medical Research Institute, Radiation Technology division. Participated in atmospheric nuclear tests: Greenhouse, 1951; Castle, 1954; Hardtack I and II, 1958; and Plumbob, 1958. Worked with RAdm Cronkite, MC, USN and RAdm Bond, MC, USN, and Capt. E Richard King, MC, USN (future President of North American Radiological Society) evaluating exposure to Marshall Island natives. Stationed at Naval Hospital Saint Albans 1955-56 (relieved Tom Mitchell), Naval Hospital Bethesda 1963, Naval Hospital Oakland 1963-64. Trained at Oak Ridge with Marshall Brucer. Now living in Canville CA (415) 837-9072.
- 1952 George Douglass Chemistry background. Originally an aviation physiologist. Entered program 1951 or 52. Sent to University of Rochester for degree, M.S. Radiobiology. Stationed at Naval Hospital Bethesda 1964-1965, AFRRI 1967-1968, and Naval Hospital Groton (Naval Undersea Medical Institute) 1968-1974. Taught submarine corpsmen at NUMI. He and Chief Reimer published a compilation of radiation control information to help the submarine corpsmen. Pub was known as Reimer's Primer. Retired in 1974.
- 1953 Jim McIlraith Certified Radiation Physicist. Aviation-physiologist, MCAS Cherry Point, 1950-1955, performing x-ray dosimetry film development, NBC warfare defense training development for the Marines. Responded to Notice seeking volunteers for radiation health program. Switched to radiation health program 1953-54. Sent to Reed College, Sandia Test Site and Oak Ridge National Laboratory (trained under Elda Anderson). Stationed at Nuclear Power Training Unit Idaho Falls 1956-58, Naval Hospital Bethesda, 1958-1960 (E. Richard King, Bill Fleming and Jim McIlraith **published literature's first bone scanning paper**); Out-service training for a Masters Degree, Columbia University under Edith Quimby (two year MS, finished in one year); USS BUSHNELL 1962-1963 (first AEC industrial radiography license of any tender), Key West (Cuban missile crisis); Naval Hospital San Diego 1966-72. In 1971 observed French atmospheric test while assigned to USS NORTON SOUND. Medical Physicist at San Diego, established medical physics training program in

cooperation with San Diego State. Dick Garver, Howard Dowling, Lee Murray and Bob Morton were trainees. Performed x-ray safety and quality performance surveys up and down West Coast. Now living in La Jolla, CA.

Charles Fugitt Tour at Office of Naval Research, London, 1959-1961.

S. C. Peckham Tour at Naval Radiological Defense Laboratory, 1958-1961.

- 1953 Dick Garver Chemist. Certified Radiation Therapy Physicist. Sent to Post Graduate School Monterey, Nuclear Engineering. Completed academic radiation therapy physics training under Jim McIlraith in San Diego in 1958, transferred to Saint Albans. Significant weapons support program experience. Assigned to Defense Atomic Support Agency (later called Defense Nuclear Agency) and AFRRI. Retired 1969. Now practicing medical physics in California.
- 1953 Charles Tedford Specialty Advisor, 1965-72. Ex-corpsman, returned through MSC out-service commissioning program. Sent to Reed college for degree, then to Nevada test site. Tours include: Naval Schools Command, Treasure Island, 1958-1960; Naval Medical School, Bethesda 1962-63; OST University of California, 1963; BUMED 1964-72, Naval Hospital San Diego 1972-74, and Commanding Officer Naval Medical Clinic Puget Sound 1974-75. RADM Cronkite, MC, USNR, RADM Bond, MC, USNR of Brookhaven National Laboratory and CAPT Tedford wrote first Navy Instruction for treatment and care of a contaminated injured man, NAVMED 6470.10, fore-runner of National Council on Radiation Protection Handbook 65. Established BUMED Radiation Effects Advisory Board. First MSC officer deep-selected for Captain. Retired 1975. State Director of Radiation Health for Georgia, later Arizona and Alaska. Now living in Scottsdale, Arizona.
- 1953 Bob George Line officer during Korean war, 18 months, NROTC, served on attack carrier PHILIPPINE SEA. Commissioned in MSC as a pharmacist, switched to Radiation Health. Went through the Rochester Program with Jim Spahn. PhD from Purdue in Radiobiology. Certified in Health Physics and Radiological Physics. Relieved Gordon Werner at Chemical Center and School, Ft McClellan, 1961-64. Participated in nuclear weapons underwater test Swordfish, 1962. Along with Jim Spahn trained approximately 10,000 test participants on radiation safety requirements. Attended OST, University of Purdue 1964-66 (Paul Ziemer's first doctoral graduate student). Director of

Radiation Biology Division at AFRRI, 1966-72; radiation therapy physicist at Naval Hospital Bethesda, 1972-73. Retired 1973 to be Associate Professor and Department Head in Bionucleonics at Purdue (3 years). Later Associate Professor and Chief Physicist at University of Indiana Medical School (14 years). Now retired and living on a lakeshore about 25 miles north of Indianapolis.

- 1953 Bill Kolb Pharmacist switched to Radiation Health. Went through the Rochester Program, M.S. Radiobiology. Tours include: USS ORION, 1962 (Relieved Earl Scrom); Naval Submarine Base Pearl Harbor, 1964-1966, DASA, 1966-1969. Retired 1969. Now a pharmacist in Texas.
- 1955 Jim Duckworth Entered program 1955 (graduate teaching assistant at Ohio State, Bob George was one of his students, 1950-51). NMRI Radiation Technology Division, Bill Chamber's group. Was trained as a pharmacist. Went through the Rochester Program, M.S. Radiobiology. Participated in atmospheric nuclear weapons tests: Upshot-Knothole, 1953; Teapot, 1955; Redwing, 1956; Hardtack I and II, 1958; Taught Radiation Chemistry in Nuclear medicine Course for Physicians at Naval Hospital Bethesda 1959-65. Stationed at Navy Radiological Defense Laboratory, San Francisco, NMRU-2 Taipei 1965-66 and later at AFRRI. Retired 1966. Deceased.
- 1955 Jim Spahn Specialty Advisor, 1976-77. Ex Hospital Corpsman (4 years). One year in the US Coast Guard during WWII. Navy Pharmacist switched to Radiation Health. Went through the Rochester Program with Bob George, M. S. Radiobiology. Tours included: NBC School, Treasure Island, 1961-64; USS ORION 1964-66, (relieved Bill Kolb); Naval Medical School, Bethesda 1966-69 (relieved Chuck Tedford as Administrative Officer of Medical Officers Course); Radiation Safety Officer at Naval Hospital Bethesda, 1969-1976. Participated in nuclear weapons underwater test Swordfish, 1962. Along with Bob George trained approximately 10,000 test participants on radiation safety requirements. Observed atmospheric nuclear test (French) in 1972 aboard USNS Wheeling. Retired 1977. Now working for the National Council on Radiation Protection in Bethesda Maryland.
- 1956 Armand R. Nice Degree in mathematics. Entered program 1956. Navy Post graduate School Monterey, Nuclear Engineering. Assigned to Naval Radiological Defense Laboratory, 1951-54. Provided bio-medical support for atmospheric nuclear test: Upshot-Knothole, 1953; Castle, 1954; and Wigwam 1955. Also assigned to Naval Hospital Bethesda 1954-59, USS PROTEUS 1960-62 (Second Radiation Health Officer assigned to a submarine tender; First RSO in Holy Loch), USS HUNLEY 1962-63, Naval Hospital Groton (Nuclear Medicine

- Technologist School, i.e., Submarine Corpsmen School), 1963-64 and USS SIMON LAKE 1967-68. First Radiation Safety Officer assigned to Navy Medical School (Health Sciences Education and Training Command) for Radioisotope Technicians (now HM-8402 Submarine Corpsmen school). Taught in Nuclear Medicine Course for Physicians. Deceased.
- 1956 Thomas W. Nooney Navy flier in WWII. Optometrist selected for University of Rochester Radiation Biology Program, 1960-1961. Stationed at Naval Hospital Bethesda 1962-1963, developed retention coefficient for thoratrast, Administrative Assistant to CAPT E. Richard King, MC, USN.
- 1957 Ivan B. Owen Assigned to Naval Hospital Bethesda 1953 to 1960; USS SPERRY 1960-1963.
- 1958 Gordon W. Werner Entered program 1958. Sent to Reed college for radiation safety training, then to Nevada test site. NBC warfare defense specialist. Served at Ft. McClellan Army Chemical School, NRDL; 1961-63; BUMED (NBC Warfare Defense desk), 1964-1970 (taught NBC Warfare Defense at Navy Medical School (HSETC)); and Ft. Detrick 1970-1972. Retired 1972.
- 1958 Frederick J. Roehs WO-1(HC)USN. Assigned to the USS FULTON, 1958.
- 1959 Earle Scrom First Medical Service Corps Officer Radiation Health Officer assigned to a submarine tender, the USS ORION, 1960. (The USS FULTON had a Warrant Officer who was the First person to serve in the new Submarine Tender Radiation Health billet but Earle was the first officer.) Was an ex-radioisotope technician. Earle Scrom and Bill Murrell were the first two licensed nuclear reactor operators in the Navy. (Licensed before anyone in the Naval Nuclear Propulsion program.) Later dismantled the medical nuclear reactor at Bethesda, 1962, while assigned to the Whole Body Counting Facility at Bethesda Naval Hospital. Was an instructor in mathematics and statistics in the officers' nuclear medicine course at Navy Medical School, 1964-1971. Retired 1971. Now teaching high school mathematics in Prince Georges County, Maryland.
- 1960 Bill Murrell Second Medical Service Corps Officer Radiation Health Officer assigned to a submarine tender, the USS HUNLEY in 1962. Was an ex-radioisotope technician. Earl Scrom and Bill Murrell were the first two licensed nuclear reactor operators in the Navy. They operated the research reactor at Naval Hospital Bethesda, 1956-60. Commissioned into the radiation health program 1962, assigned to USS HUNLEY, 1962-63, Norfolk Naval Base 1964, USS

CANOPUS 1965-68, Sub Base Pearl Harbor 1968-1971, USS DIXON 1971-76, and Naval Hospital San Diego 1976-82. Prior to assignment to Naval Hospital San Diego Bill Murrell had served, either PCS or long term TAD, on every Submarine Tender in the Navy which supported nuclear powered ships. Retired 1982. Did first training for nuclear weapon TLD program. Performed NTPIs 1980-82. Now a Radiation Safety Officer for Salk Institute in La Jolla and consultant to several bio-tech firms in San Diego.

- 1960 Walter Siversten Assigned to Naval Hospital Bethesda, 1960
- 1961 Bill Beckner Specialty Advisor, 1977-81. Certified Medical Nuclear Physics. Instrumental in setting up the NAVSEA Radiological Control Program for the weapons community. Tours included NMRU-2, Taipei 1963-65; George Washington University 1966; NMRU-2 Taipei 1967-68 (ran a nuclear medicine clinic at Da Nang Hospital during Viet Nam war); Naval Hospital Bethesda 1971-76; BUMED 1977-81; OP-45, 1982. Was an ex-radioisotope technician, Naval Hospital Bethesda 1956-61, commissioned the whole body counters. (Identified the cobalt-60 on a HMC's neck-tie when the NMRI irradiator was contaminated. The story has it that friction in the pneumatic tubes had worn through the cladding and was wearing off the cobalt-60. It was venting into the control room.) Retired in 1983. Now National Council on Radiation Protection Secretariat in Bethesda Maryland.
- 1961 Robert F. Moran Trained in hospital administration. Assigned as Hospital Administrator after tender tour. Retired as Captain, MSC approximately 1988.
- 1961 Clyde L. Hensley Radioisotope Technician commissioned as a Supply and Administration Officer under CAPT Bell's program for recruiting radiation health officers. Assigned to Camp LeJune in administrative position, never switched to radiation health, spent most of his career with the Marines. In Viet Nam was shot down in a helicopter and wounded in subsequent defense of the survivors, received Silver Star. Managed nuclear medicine department at Naval Hospital Camp Pendelton, 1970-197??.
- 1961 G. I Soule Submarine Base Pearl Harbor (S & A), 1964; USS ENTERPRISE, 1968-1969.
- 1961 C. Levich AFRRRI 1961-67.
- 1962 Bob Reed Pharmacist mate during WWII, served in the Pacific war zone. Attended Toledo University, commissioned a pharmacist, 1950. Switched

to Radiation Health. Went through the Rochester Program, M.S. Radiobiology. Tours include: USS PROTEUS 1962-64 (relieved Armed Nice in Holy Lock); Naval hospital Groton 1964-68; AFRRI 1968-70; and Pearl Harbor Naval Shipyard 1970-74. First military Director of Radiation Health at a nuclear repair shipyard, Pearl Harbor. Retired 1974. Deceased, 1985.

- 1962 R. O. Wallace USS NEREUS, (S & A), 1962-1964.
- 1963 Tom Bell Medical Research and Licensing expert and later Head of the Radiological Control and Health Branch, CNO. M.S. Physiology and Biophysics, Georgetown University. Directed program for reconstruction of radiation exposures for atmospheric nuclear weapons test participants for the Navy while at OP-45 and for DoD while at the Defense Nuclear Agency. Initiated Navy Broad Scope License. Tours include NNMC Training Program 1963; USS HUNLEY, 1964-1966; NNMC Center Command, Assistant Radiation safety Officer, 1966-1967; OST Georgetown University, 1967-1970; Naval Medical Research Institute, 1970-1978; OP-981 initiation of NTPR, 1978-1982; OP-45, development of the broadscope license, 1982-1986; Defense Nuclear Agency, Director, Nuclear Test Personnel Review, 1986-1990. Retired 1987. Now GS-15, Director, Health Physics Programs Division in the Department of Energy's Office of Environment Safety and Health.
- 1963 L. W. Wachtel NRDL San Francisco, 1963-66.
- 1963 L. L. Laughlin DCTC, Philadelphia, 1963-65.
- 1963 A. D. Hatten USS SPERRY, (S & A), 1963-64.
- 1963 T. W. Mac Connell USS HOLLAND, (S & A), 1963-64.
- 1963 R. A. Morin USS FULTON, (S & A), 1963-64.
- 1964 John Duley LT Line Officer transferred to MSC as Ensign for graduate training opportunity, M.S. Nuclear Engineering, Georgia Tech. Board Certified in Medical Nuclear Physics. NBC warfare defense and nuclear medicine specialist. Introduced first computer used to manipulate and analyze nuclear medicine images. Tours include: Army Chemical Center and School Ft McClellan, Alabama, 1964-1967; OST Georgia Tech, 1967-1968; Director Nuclear Medicine course for physicians, 1968-1972; Naval Nuclear Power Unit Ft Belvoir, 1975-1976 (RASO transferred to Port Hueneme 6-76); Radiological Affairs Support Office Port Hueneme, 1976-1979 (removed low level contaminated rock (Cs-137

and Sr-90) from Antarctica and used it for sub-surface fill for large parking lot at Port Hueneme. Lot is still monitored by Nuclear Regulatory Commission. Retired 1979. Now living in Burke Virginia making radiation safety films. Still owes Bob George \$50 on wager over who would retire first. Says he will pay if Bob comes to collect.

- 1964 Lamar Beuchler Specialty Advisor, 1982-1985. Tours include: USS BUSHNELL, 1964-1965; Naval Training Unit Ft. McClellen April-May 1964 (NBC Defense Training); NBC Course, Damage Control School Philadelphia, 1965-1967; Naval Technical Training Center, Treasure Island (NBC Training Program) 1967-1970; Naval Submarine Base Pearl Harbor, 1971-1975; OST, Colorado State, Ft Collins 1975-1977; Head, Radiation Safety Naval Hospital Bethesda, 1977-1981; BUMED 1981-1985; CINCLANT FLEET Medical Office 1985-1987. Retired 1987. Now the radiation safety officer for the Medical College of Virginia in Norfolk.

- 1964 Tom Stefanakos Medical physicist. OCS Newport, July 1964. Qualified "Hard Hat Diver, 1967; Stanky Hood training 1968. While assistant to Radiology Specialty Advisor coordinated procurement of all major radiology procurement 1976-1984. NBC warfare defense specialist; instructor at NBC School Philadelphia. Managed SUB FLT 1 Fast Pitch Softball team, All Navy Champions, and 7th All World, 1965. Tours include: Training, Naval Training Unit, Ft McClellen, Alabama, 1964; USS NEURIUS, Nuclear Weapons Officer and qualified OOD in port and underway, 1964-1966; Submarine Base Pearl Harbor, 1966-1968; NBC Warfare Defense, Damage Control School, Philadelphia, 1968-1971; Out Service Training, Georgia Tech, 1971-73; Naval Hospital Oakland, 1973-1975; Naval Hospital Portsmouth 1976-1984. Retired 1984. Now a Radiation Therapy Physicist in Cleveland.

- 1964 K. E. Fligston NRDL San Francisco, 1964.

- 1964 J. P. Alcedo DCTC, Treasure Island, 1964

- 1964 R. S. Cunningham USS GILMORE, (S & A), 1964.

- 1964 L. W. Flood OCS Then Naval Medical School; NRDL 1964-1967.

- 1964 H. J. F. Borchert OCS Then Naval Medical School.

- 1965 W. D. Skidmore Ph D. Biochemistry. AFRRI, 1963-1976.

- 1965 G. A. Smithwick Submarine Medical Center, Laser research, 1965-66
- 1965 W. Hollister USS SPERRY, 1965
- 1966 Bob Morton Certified Radiological Physicist. Tours include: USS NEREUS, 1966-1968; NBC Defense School, Treasure Island, 1969-1972; Naval Hospital San Diego, 1972-1976; Naval Hospital Bethesda, 1975. Transferred to Public health Service, 1976. Now Independent consult on regulatory affairs, Concord, CA.
- 1966 Vince McManaman Radiobiologist. PhD. Purdue. Tours include NBC Warfare Defense School, Philadelphia; Naval Medical School in charge of the Nuclear Medicine Course for Physicians and Nuclear Medicine Technicians School, 1974-1977; AFRRI; RASO, Port Hueneme, 1981- ; Naval Hospital Bremerton; AFRRI, 1984-1985; and Naval Dosimetry Center, 1985. Retired 1985. Now teaching physics at Montgomery County College.
- 1966 P. D. Tveten B. S. Physics. NMRU 2, Taipei, 1966-1969; Naval Hospital Bethesda (Radiation Safety Department) 1970-1973; Submarine Base Pearl Harbor, 1975-; NMRU 2, Taipei; Naval Environmental Health Center, 1980-1981. Retired. Now working at the Navy Environmental Health Center, Norfolk.
- 1966 T. M. Beckham DCTC, Treasure Island, 1966
- 1966 L. K. Barden B.S. Physics. USS ORION, 1966
- 1966 R. G. Buckles PhD Chemical Engineering, M.S. Biophysical Chemistry. Tours include: Damage control School 1962-64; NRDL, 1965-67; NMRI, Laser Research, 1967-69.
- 1966 J. C. Huling Damage Control School, Philadelphia, 1962-1964; NRDL, Biomedical Division 1964-1966.
- 1967 John Lee Murray B.S. Chemistry. M.S. Medical Physics San Diego St. Certified Radiation Therapy Physicist. Pacific Fleet tennis champion and 1st All Navy over 35 age group. Installed the Navy's first medical linear accelerator and first CT-scanner at Naval Hospital San Diego. Planned radiology spaces for new NH San Diego. Tours include: OCS, Newport Rhode Island, February, 1965; Naval Training Unit, Ft McClellen for NBC warfare defense training, April-May 1965; USS HOLLAND, Rota Spain, 1965-1966; Naval Hospital Bethesda

- (Photodosimetry Center) 1967-1968; Naval Hospital San Diego, 1968-1971 (McIlraith's training program); Naval Hospital Philadelphia, (First Medical Physicist at NH Philadelphia) 1971-1976; Naval Hospital San Diego, 1976-1984. Retired 1984. Medical Physicist now living about 50 miles north of San Diego.
- 1967 Paul Durfee First Officer in Charge at the Radiological Affairs Safety Office, Yorktown. Tours include: Naval Hospital Bethesda, 1967-1968; USS ORION 1968-1969; USS NEREUS, 1969-1970; NBC Warfare Defense, Damage control School, Philadelphia, 1971-1976; AFRRI, 1976-1981; Naval Submarine Base Bangor, 1981-1984; Radiological Affairs Support Office, 1984-1988; Navy Environmental Health Center 1988-1991. Retired 1991, now living in Williamsburg, VA.
- 1967 C. B. Galley Certified Health Physicist. Implemented two chip Lithium-fluoride TLD system in the Navy while at Radiation Safety, Naval Hospital Bethesda. Tours include: USS HUNLEY, 1967- ;Naval Undersea Medical Institute, 1974- ; AFRRI; Naval Hospital Bethesda (Naval Dosimetry Center), 1982- ; Director, Naval Weapons Radiological Control Program, NAVSEA; AFRRI.
- 1967 Ray Chaput PhD Zoology. Tours include: AFRRI, 1967-1973 (active reserve); BUMED, 1973-1975 (TAD six months to observe a French atmospheric nuclear test. US was not invited so ship had to anchor outside French territorial waters.); Naval Undersea Medical Institute, 1975-1978, (transferred RSO and Sub Med Off training to NUMI from Balston Spa); Naval Shipyard Pearl Harbor, 1978-1981; AFRRI 1981-1982; Office of Naval Technology, 1982-1984; BUMED 1984-1988; Naval Research and Development Command, 1988-1992. While at AFRRI in the early 70's with Gary Zeman questioned the LD/50 values being published for fast neutrons. Their research showed the LD/50 number significantly overstated and resulted in stopping the development of the neutron enhanced weapon at a time when development of the weapon would have been a severe strain on the US economy. Retired 1992. Now director of Christian Education for his Parish in Bethesda.
- 1967 J. McCracken NRDL, 1967-1970.
- 1967 J. D. Butler Submarine Medical Center, Laser research, 1967.
- 1967 D. E. Reardon Nav Unit, Ft McClellan 1967.

1967	T. L. Sallee	M. S. Chemistry. Naval Medical Research Institute, 1967-1970.
1967	J. G. Dillon	DCTC, Philadelphia
1967	J. F. Borgia	Tours include: Naval Training Unit, Fort McClellen February 1967-March 1967; USS PROTEUS, 1967-1969; NRDL April 1969-August 1969.
1967	E. W. Pinkham III	B. S. Biology. USS HOLLAND 1967-69.
1967	M. I. Malnekoff	B. S. Biology. USS GILMORE, 1967-68; Naval Hospital Bethesda 1968-1969. Now a gemologist in San Francisco.
1967	F. A. Wenslawski	B. S. Physics. NRDL, 1967-69. Civilian at Mare Island Naval Shipyard 1969-1972.
1967	M. D. Mullin	USS SIMON LAKE, 1967.
1967	E. F. Samuelson	B. S. Physics. USS SPERRY, 1967.
1967	H. Ng	B. S. Physiology. NRDL 1967-1969.
1967	D. L. Odor	M. S. Radiation Health. First RSO on USS SAMUEL GOMPERS, 1967.
1968	B. J. Derry	B. S. Chemistry. First RSO on USS PUGET SOUND, 1968.
1968	M. P. Farr	B. S. Biology. USS FULTON, 1968-1970; Damage Control Training Center, Treasure Island, 1970-1971.
1968	J. B. Larkin	M. S. Physics. Submarine Medical Center, New London, LASER research, 1968.
1968	H. J. Mitchell	M. S. Chemistry. Defense Atomic Support Agency (Defense Nuclear Agency), 1968-1971.
1968	F. F. Brandt	B. S. Chemistry. USS GILMORE, 1968-1971; Damage Control Training Center, Treasure Island, 1971-1973.

- 1968 R. T. Kovacic B. S. Biochemistry. AFRRI 1968-1971.
- 1968 D. C. Van Dyke B. S. Biology. USS CANOPUS, 1968-1971.
- 1968 J. D. George Specialty Advisor, 1985-1991. Certified Radiation Therapy Physicist. M.S. Physics, M.S. Operations Research. Designed radiation therapy department for new Naval Hospital Bethesda, developed counting method to verify special tools used inside containment tents are not contaminated, revised Radiation Health Protection Manual implementing 1991 Title 10 Part 20 regulations, discontinued slit-lamp exams as part of radiation physical, implemented heat stress prevention standards for personnel in wet-suits and air fed hoods, introduced real-time exposure monitoring for steam generator inspection teams, directed Navy's review of alleged Human Radiation Experiments, developed high data density scan mapping for environmental release surveys. With Skip Kerschner initiated Surface Warfare Pin for Medical Service Corps Officers. Tours include: BUMED 1969-1973; Naval Hospital Bethesda, 1973-1977; Naval Hospital Great Lakes, 1977-1981; Armed Forces Staff College, 1981; Naval Shipyard Pearl Harbor, 1981-1985; BUMED, 1985-1991; Naval Dosimetry Center 1991-1995; Naval Sea Systems Command, 1995-present.
- 1968 W. C. Sonzogni M.S. Biochemistry. Rowed on crew for University of Wisconsin. Assigned USS HUNLEY, Charleston, 1969-71. Relieved Chuck Galley.
- 1968 J. W. Mozzer M.S. Biochemistry, MBA Business. USS PROTEUS, relieved J. F. Borgia, 1969.
- 1968 M. V. Broadbent B. S. Zoology. USS SAMUAL GOMPERS
- 1968 D. L. Jernigan PhD Physical Chemistry. Naval Hospital Bethesda
- 1968 Mike Farr B. S. Biology. USS FULTON.
- 1969 Cal Myers Certified Radiation Therapy Physicist. PhD, Medical Physics. Tours include: Naval Hospital Bethesda March-May 1968 (Orientation); NBC School Philadelphia May-June 1968 (CBR Training); USS NEREUS 1968-1970; Naval Hospital San Diego 1970-1971 (McIlraith's training program); Naval Hospital Great Lakes 1971-1973. Transferred to the Naval Reserves 1973, attended Wayne State for a PhD. CO Naval Reserve Unit, promoted to O-6. Activated and deployed with Fleet Hospital for Desert Storm. Now living in Kansas City.

- 1969 J. D. Rooke M. S. Biochemistry. USS SIMON LAKE, 1969-1972.
- 1969 Bob Devine Certified Health Physicist. PhD Physics, Berkley, thesis advisor was Edward Teller, Father of the H-bomb. Co-designer of the DT-648, 4-chip LiF personnel monitoring badge. Tours include: Naval Radiological Defense Laboratory, 1967-1969; AFRRI, 1969-1971; NAMRU-2 Taipei (learned to speak Chinese), Jakarta with NAMRU-2 Detachment (shot in leg by local farmer while packing supplies by mule to remote site) 1972-1974; Naval Hospital Charleston, 1976-1980; Radiological Controls program NAVSEA, 1981; AFRRI, 1981-1983; Defense Nuclear Agency, 1983-1986; and Naval Hospital Bethesda, 1986-1989. Retired 1989. Now working at Los Alamos.
- 1969 J. L. Birkler M. S. Physics. USS PROTEUS, 1969-1971, AFRRI, 1971-1972.
- 1969 Dave Temple M.S. Chemistry. USS SPERRY, 1969-1972.
- 1969 G. A. Mc Daniel B. S. Physics. First RSO on USS L. Y. SPEAR, 1969-1972.
- 1969 W. E. Moritz PhD. Biomedical Engineering. Naval Medical Research Institute, 1969-1972.
- 1970 R. S. Logan B. S. Chemistry. Tours include: USS PUGET SOUND, 1970-1971; and Radiation Safety Department, Naval Hospital Bethesda, 1974-1977.
- 1970 Lou Milavickas Certified Medical Physics. Tours include: USS ORION (relieved Paul Durfee), 1970-1973, Naval Medical School (directed Nuclear Medicine Course). Transferred to Naval Reserve, attended graduate school for PhD. Now practicing radiation therapy physics in Akron, Ohio.
- 1970 Tom Hinz Tours include: AFRRI, Naval Hospital Great Lakes, 1973-1977. Accepted into Medical School. Completed residency in radiology at Naval Hospital San Diego.
- 1970 Gary Adler Certified Radiation Therapy Physicist. MS. Harvard. Tours include: Naval Training Unit, Ft McClellan, 1970-1973; AFRRI 1973-1975; Naval Hospital Portsmouth 1975-1978; OST Harvard, 1978-1981; Naval Hospital

Great Lakes, 1981-1984; Naval Hospital Portsmouth, 1984-1990. Retired 1990. Now a Radiation Therapy Physicist in Terre Haute, Indiana.

- 1970 Jerry Thomas Certified Radiological Physics, Radiation Health, and Nuclear Board of Science. Coordinated construction of radiology department for new Naval Hospital Bethesda. Tours include: USS HOLLAND, Rota Spain, 1970-; Naval Hospital Portsmouth, 19; OST Univ of Kansas; Naval Hospital Bethesda; Uniformed Services University of Health Sciences, 1982.
- 1970 Ken Groves First Director of Navy Nuclear Weapons Radiological Controls Program Office, name changed to Navy Radiological Controls Program Office in 1982 when all Navy Industrial Radiation Control programs were added. Responsible for the transfer of the Radiological Affairs Support Office (RASO) from NAVFAC to NAVSEA as a detachment; established the first OIC billet for Radiation Specialist at RASO. First Radiation Health Officer deep selected for Commander. Second Radiation Health Officer selected as Director of Radiation Health at Pearl Harbor Naval Shipyard. Prior corpsman. Identified detectable levels of neutrons in berthing spaces from weapons and calibration sources while on USS CANOPUS resulting in redesign of spaces and shielding on all submarine and destroyer tenders. Tours include: USS CANOPUS, Holy Lock, 1971-1973; Naval Hospital Great Lakes, 1973-1975; Naval Ship Yard Pearl Harbor 1975-1979; Radiological Affairs Support Office, Port Hueneme, 1979-1980, first Director of RASO; Director Navy Radiological Controls Program Office, NAVSEA, 1980-1986. Retired 1986. Program Manager in the Environment, Safety and Health Division at Los Alamos National Laboratory.
- 1970 Dave Temple M. S. Chemistry. USS SPERRY 1970-1973.
- 1970 J. B. Larkin USS HOLLAND 1970-.
- 1970 S. D. Houghes M. S. Physics. USS FULTON 1970-1973.
- 1970 K. R. Foster PhD Physics. Performed micro-wave bio-effects research at Naval Medical Research Institute, 1970-1973, AFRRRI 1974. Currently Associate Professor, Department of Bio-Engineering, University of Pennsylvania. Co-editor of "Phantom Risk", MIT Press, 1993.

- 1970 Bob Yaccovissi Non-ionizing (rf, EMF and LASER) radiation expert. Prior electronics technician, tour on USS COLUMBUS, 1968-1969; applied to nuclear power program. Attended Nuclear Power School, Bainbridge, 1969; Proto-type at West Milton. Picked for staff at West Milton. Commissioned in 1970. With Paul Tveten spent 6 months at Edgewood Arsenal Army LASER training, then to Navy Environmental Health Center, Cincinnati for duty, 1971-1973; TAD on USNS FURMAN observed French atmospheric test, 1973; USS GILMORE, 1974-1977, La Madellena; Naval Submarine Base, Bangor, 1977-1981; USS NIMITZ, 1981-1983 (two deployments, ship shot down Libyan planes); Navy Environmental Health Center, 1983-1987; Marine Corps Headquarters, 1987-1991 (First officer in this position, set up Marine Corps RADCON program); and BUMED, 1991-present.
- 1971 Gary H. Zeman Sc. D. Radiological Health, Johns Hopkins University, 1976. Certified Health Physicist. Dosimetry expert. Prior Line LT aboard USS NESPELEN (AOG-55) 1969-1971. Stationed at AFRRI, 1971-1974, Out-service Training John Hopkins University 1974-1976; Radiation Safety Officer Naval Hospital Bethesda, 1976-1982; and AFRRI, 1982-1986,. Performed primary development work on the first Navy Lithium-fluoride dosimeter and served as member of ANSI N13.11 standard development group on personnel dosimetry performance testing. Served as first head of AFRRI's military applications department to bring the results of the research lab to practical use including: NATO nuclear battlefield, USAF military man-in-space program, NASA space station radiation plans, DoD directed energy weapon development program, and deployment of NOAA's solar x-ray imager satellites. While at AFRRI in the early 70's with Ray Chaput questioned the LD/50 values being published for fast neutrons. Their research showed the LD/50 number significantly overstated and resulted in stopping the development of the neutron enhanced weapon at a time when development of the weapon would have been a severe strain on the US economy. Retired 1989. Now working for AT&T Bell Laboratories in New Jersey.
- 1971 M. P. Fink M. S. Radiochemistry. AFRRI 1971-1974.
- 1971 K. G. Mendenhall Specialty Advisor, 1991-Present. M.S. Physics. Certified Nuclear Medicine Physics. First Radiation Specialist to be appointed Head, Radiology Department, Naval Hospital Bethesda. Tours include: USS PROTEUS, Guam, 1971-1974; AFRRI, 1974-1977; National Naval Medical Center, Bethesda, 1981-1985; CNO, OP-45, 1985-1991; BUMED 1991-1995; Naval Dosimetry Center 1995-present.

- 1971 E. V. Johnson B. S. Chemistry. USS HUNLEY, Guam.
- 1971 P. A. Jursinic M.S. Biophysics. USS SIMON LAKE, Rota.
- 1971 John E. Weaver B. A. Chemistry. Tours at USS PUGET SOUND; Naval Hospital Bethesda (coordinated Nuclear Medicine Course for Physicians). Accepted into medical school. Captain Weaver, MC, USN retired 1993 as Chief of Pediatrics, Naval Hospital Charleston.
- 1971 S. K. Liddell B. S. Mathematics. USS SAMUEL GOMPERS, (relieved Mike Broadbent), 1971-1974.
- 1972 Joe Decicco Certified Health Physicist. First Officer in Charge, Naval Dosimetry Center, NEHC Detachment. Expert on dosimetry and hospital radiation safety. Implemented the four chip Lithium-fluoride badge into the Navy. Tours include: Naval Hospital Bethesda, 1972-1974; USS SIMON LAKE, 1974-1976; Naval Hospital Pensacola, 1976-1979, (First Radiation Safety Officer); Naval Hospital Orlando, 1979-1984 (First Radiation Health Officer); Radiation Safety Officer, Naval Hospital San Diego, 1984-1986, (relieved Bill Murrell); Radiation Safety Officer, Naval Hospital Bethesda, 1986-1991. Retired 1991. Now working for U. S. Nuclear Regulatory Commission.
- 1972 Bill Flor PhD. Tours include AFRRI, 1972-1982; Naval Weapons Radiological Control Program, NAVSEA, 1981-1985; Naval Shipyard Pearl Harbor, 1985-1988; Defense Nuclear Agency 1988-1992. Retired 1992. Now at Los Alamos National Laboratory.
- 1972 T. C. O'Grady M. S. Radiation Biology. Performed non-ionizing radiation bio-effects research at Naval Surface Research Laboratory, Dalgren, VA, 1972-1975.
- 1973 Larry Parr Certified Nuclear Medical Physics. M. S. Radiological Science. Tours include: Radiation Safety Department, Naval Hospital Bethesda 1973-1975 (developed analysis method for sulfur pellet in accident dosimeter); OST University of Florida, 1976-1978; Naval Hospital Great Lakes, 1976-1981; Naval Hospital Pensacola, 1980- ; Naval Hospital Oakland, 1982-1985; CNO, OP-45, 1985-1987; Naval Hospital Bethesda, 1987-1990; Uniformed Services University of Health Sciences, 1990-1993; National Naval Medical Center, 1994-1997; Naval Medical Center Portsmouth, 1997-present.

- 1973 F. Hodge PhD Radiation Biology. NMRU-2 Taipei, 1973-1976;
NMRI, 1976.
- 1973 J. L. Hosszu PhD Physics. Tours at AFRRI, Dalgren; NMRI, 1975- ;
Radiation Safety Office Naval Hospital Bethesda, 1980-1985; Naval Hospital
Bremerton, 1985-1988; USS EMORY S. LAND, 1987-1989; and Radiological
Affairs Support Office Yorktown, 1989-1993. Retired 1993, to be a radiation
safety officer at a hospital in Texas.
- 1973 D. F. Fisher B.S. Zoology. USS FULTON, 1973-1977
- 1973 S. C. Tolan B. S. Biology. USS ORION, 1973-1976.
- 1973 R. B. Greear USS SAMUEL GOMPERS, 1973-1976.
- 1974 J. Doug Bennett Certified Radiation Therapy Physicist. Tours include: USS
PROTEUS, Guam, 1974-1975; Naval Hospital San Diego, 1975-1979, Naval
Hospital Bethesda 1979-1982. Transferred to Naval Reserves 1982. XO Fleet
Hospital, deployed to Baharain for Desert Storm, 1991. Selected to O-6 in 1992.
Now a medical physicist in Duluth, Minnesota.
- 1974 Jim Malinoski M.S. Biochemistry. Tours include: USS SPERRY, 1974-
1976; OST San Diego State, 1976-1978; Naval Medical Clinic Pearl Harbor,
1981-1984; Radiological Affairs Support Office, Yorktown, 1984-1990; Chief of
Naval Operations, N-45, 1990-1997; AFRRI -1997-present.
- 1974 R. G. Hamilton M.S. Radiation Health. AFRRI, 1974-1977.
- 1974 J. V. Moniot M.S. Radiation Biology. AFRRI, 1974-1977.
- 1974 M. P. Grissom Board Certified, Radiation Health, M.S. Radiation Health.
Instrumental in the reconstruction of Nuclear Test Participant exposures. Tours
include: AFRRI 1977; OST Catholic University; OP-45, 1982-1985; Naval
Hospital Oakland, 1985. Retired. Now Director, Health Physics at Stanford Linear
Accelerator Center.
- 1974 Robbe Enge Certified Health Physicist. Line Officer (LT) who
transferred over to MSC. Tours include: Naval Nuclear Power Unit, Ft Belvoir

1974-1975; USS L. Y. SPEAR, 1975-1977; BUMED 1979; Naval Shipyard Portsmouth, 1983-1985; Naval Weapons Radiological Control Program, 1985-1987; War College, 1987; Pearl Harbor Naval Shipyard, 1988-1991; OP-04, 1991-1992. Retired 1992. Now a radiation safety officer at Pantex, Amarillo Texas.

- 1974 G. I. Snyder M.S. Public Health. Tours include: USS HUNLEY 1974-19 ; Naval Hospital Bethesda, 1976- ; BUMED, 1980-1984; Naval Hospital Portsmouth, 1984-1988; Navy Environmental Health Center, Norfolk, 1988-1994. Retired to be Radiation Safety Officer for University of Florida, Gainesville.
- 1974 R. M. Heublein M. S. Nuclear Engineering. USS CANOPUS, Holy Loch, 1974-1977; RASO, Port Hueneme, CA, 1976-. Now working for Institute for Nuclear Power Operations (IMPO).
- 1974 M. F. Johanboeke B. S. Biology. USS L. Y. SPEAR.
- 1974 Paul Weathersby Diving physiology expert. Developed U.S. Navy Decompression Tables for mixed gas diving (helium); warm water diving (Persian Gulf); and high altitude diving (mountain lakes). Tours include: OST University of Washington; NMRI and Commanding Officer, Naval Submarine Research Laboratory, Groton.
- 1975 Eric Kearsley Certified Health Physics. PhD Radiological Physics. First Navy MSC appointed Director, Armed Forces Radiobiology Research Institute. Developed a dosimetry cavity theory (named after him) in Out Service Training. Member of Health Physics Certification examining Board. Inspector for National Voluntary Laboratory Accreditation Program. Tours include: AFRRI, 1975-19 ; OST Univ of Wisconsin; Radiation Safety Department, Naval Hospital Bethesda (implemented neutron correction factors for BUMED personnel dosimetry) 1980-1985; Puget Sound Naval Shipyard 1985-1988 (relieved Skip Kerschner); AFRRI 1988-1995; Director, AFRRI, 1995-present.
- 1975 Mike Taylor Certified Radiation Therapy Physicist. M.S. Biomedical Engineering. Tours include: USS FULTON, 1975- ; Naval Hospital Oakland, 1981-1985 ; Naval Hospital Bethesda, 1985-1991- ; Pearl Harbor Naval Shipyard, 1991-1995; and National Naval Medical Center, 1995-present.
- 1975 R. K. Peksens Certified Radiation Therapy Physicist. M.S. Radiation Physics. Former Marine Corps helicopter pilot in Viet Nam. Tours include: Naval Hospital Philadelphia, 1975-77; Naval Hospital Portsmouth, 1977-1983; Naval

Hospital Bethesda, 1983-1985. Now practicing medical physics in Tampa, Florida.

- 1975 Mike Knight Third Officer in Charge, RASO. Tours include: USS PUGET SOUND, 1973-1975; OST Colorado State; Environmental Health Center, 1975-1977; Naval Hospital Bethesda 1978-1980; USS ENTERPRISE, 1980-1981; Naval Undersea Medical Institute, 1981-1985; OP-45, 1985-1991; RASO, 1991-1993. Retired 1993. Now working as a radiation health officer at Pantex in Amarillo Texas.
- 1975 Gary E. Williams M.S. Natural Science. Tours include: USS HOLLAND, Holy Loch, 1975-19 ; Navy Environmental Health Center, Cincinnati, 19 -19 ; Naval Hospital Charleston, 1980- ; Navy Environmental Health Center, Norfolk; BUMED, 1983-1986; Naval Hospital San Diego, 1986-1991; Naval Environmental Health Center, Norfolk, 1991.
- 1975 Zory Glaser PhD Chemistry. Expert on non-ionizing radiation. Performed bio-effects research at Naval Surface Warfare Laboratory, Dalgren, Virginia; later stationed at NMRI. Transferred to Public Health Service. Now living in Bethesda area.
- 1975 Jim Kerr USS SAMUEL GOMPERS, 1973-1975; USS PUGET SOUND, Norfolk, 1975- ; CVN CARL VINSON 1980-1982; Naval Hospital Pensacola.
- 1975 J. R. Miller B. S. Biology. USS SAMUEL GOMPERS, San Diego, 1975- .
- 1975 C. R. Woodward B. A. Chemistry. Damage Control Training Center, Treasure Island, 1975-1978.
- 1975 J. L. Winstanley B. S. Zoology, M.S. Radiation Health Physics (1988). USS HUNLEY, Charleston, 1975-1978; USS PROTEUS, 1978-1979; NTTTC Treasure Island, 1979-1981; USS ENTERPRISE, 1981-1983. Currently Health Physicist at Lawrence Livermore National Laboratory and Commander, Medical Service Corps, USNR.

- 1975 Bill Wedding Certified Radiation Therapy Physicist. M.S. Physics. Tours include: USS PROTEUS, Guam, 1976-1979; Naval Hospital San Diego, 1979-1982; Naval Hospital Portsmouth, 1982-1983. Now a radiation therapy physicist University Community Hospital, Tampa, Florida.
- 1975 John Jacobus M. S. Physics; M. S. Bioscience. Tours include: USS ORION, 1975- ; USS PROTEUS, 1981; Naval Hospital Charleston, 1983-1986; AFRRI, 1986-1990; Naval Hospital Bethesda, 1990-1993; Naval Dosimetry Center, 1993-1994. Retired 1994. Now a medical physicist at the National Institute of Health.
- 1975 Tony Pulcrano B. S. Biology. Prior x-ray technician. Tours include: USS DIXON, 1975-1978; Naval Hospital Bethesda, 1979-1981; USS EISENHOWER, 1981-1983; Naval Hospital Portsmouth 1983-1986; Radiological Affairs Support Office, Yorktown, 1986-1989; Naval Hospital Portsmouth 1989-1991. Retired 1991. Now Radiation Safety Officer for Virginia.
- 1976 Jim Israel M. S. Radiation Physics. Damage Control Training Center, Philadelphia, 1977-1980; Naval Hospital Bethesda, 1980. Now practicing medical physics in Clarksburg, West Virginia.
- 1976 Tom Stoeckel B. S. Biology; M. S. Radiation Physics. Radiation Therapy Physicist, Naval Hospital Bethesda, 1977-1979; USS DIXON 1979-1981. Registered Nurse. M. S. Psychology 1983, Currently Director, Emergency Department, Valley Medical Center, Fresno, CA. Commander, USNR.
- 1976 F. W. Henry PhD Biophysics. AFRRI, 1976-1981; NMRI 1981.
- 1976 C. Rick Jones M. S. Radiological Science. Tours include: USS SPERRY, 1976-1978; Port Huneme 1978-1979. Worked in civilian capacity at NAVSEA 06GN, Weapons Radiological Control Program, 1979-1985. Now Director Health Physics and Industrial Hygiene Programs for Environment and Safety Division, Headquarters, Department of Energy (works with Tom Bell). (Wife is also a health physicist and works with Joe Decicco at Nuclear Regulatory Commission Headquarters.)
- 1976 Greg Lotz Expert on Non-ionizing radiation. His research helped set national standards for rf and EMF exposure limits. Tours include: Naval Aeromedical Research Laboratory, Pensacola, 1976-1982. Continued to work at

the lab in a civilian capacity until 1992. Now serves as a U. S. Public Health Service Officer based in Cincinnati, Ohio and continues research with rf and emf.

- 1976 R. P. Layton PhD Physics. NMRI 1976-1979.

- 1976 J. V. Moniot M. S. Zoology. USS CANOPUS, 1976-1979.

- 1981 Rick Lafontaine Certified Radiological Physicist. PhD Radiological Physics, UCLA; MBA Hospital Administration. Coordinated the radiology department construction, equipment selection, installation and acceptance for the new Naval Hospital San Diego. Tours include: Naval Hospital Oakland; Naval Hospital San Diego, 1985-1991; Puget Sound Naval Shipyard, 1989-1992; and Naval Hospital Bethesda, 1992-1995; Specialty Advisor at BUMED, 1995-present.

- 1977 Bruce Vesper Certified Health Physicist. Tours include: USS HOLLAND, 1977-1979; Stationed Pearl Harbor Naval Submarine Base, 1979-1982, OST Colorado State, 1982-1984; AFRRI 1984-1988 (taught in the Medical Effects of Nuclear Weapons Course; Extensive work with decontamination of Kwajalein and Johnson Islands). Retired 1988. Now a Radiation Safety Officer at Hanford National Laboratory.

- 1977 "Skip" Kerschner Certified Health Physicist. M.S. Radiation Health. Expert on non-ionizing as well as ionizing radiation. Ex-enlisted intelligence specialist (Arabic interpreter), ex-Lieutenant Line Officer (Deep Sea Diver) who transferred over to MSC. First Medical Service Corps Radiation Health Officer at Puget Sound Naval Shipyard. Initiated Surface Warfare Qualification pin for Medical Service Corps officers. Coordinated research on bubble dosimeter. Atlantic Coast Karate Champion, age over 35. Tours include: USS PROTEUS, Guam, 1977-1978; USS HUNLEY, Guam, 1978-1980, USS PROTEUS, 1980-1981; OST University of Arkansas, (one year spent on respirator research at Los Alamos National Laboratory), 1981-1983; Naval Shipyard Puget Sound 1983-1985; Trident Refit Facility Bangor, 1985; Puget Naval Shipyard, 1986; Bureau of Medicine and Surgery, 1986-1991. Retired 1991. Served as Director of Radiation Health and Environment, Nevada Test Site, now at Batelle Northwest Pacific National Laboratory.

- 1978 Heidi Pabon Certified Diagnostic Medical Physics. First female Radiation Health Officer, 1978. Stationed at BUMED. Now a medical physicist in San Juan Puerto Rico.

- 1978 Tom Hasselbacker M.S. Radiation Health. Last Corpsman on the Nautilus. Commissioned 1979. Tours include: first RSO on USS FRANK CABLE; Naval Undersea Medical Institute New London, 1984-1986; Naval Hospital Groton, 1986-1988; OST, University of Lowell, 1988-1990; Naval Undersea Medical Institute New London, 1990, retired 1994.
- 1978 Paul Blake Certified Health Physics. PhD Radiological Physics University of Wisconsin. Co-designer and implementer of the DT-648 4-chip LiF Personnel dosimeter; designer and implementer of automation of the Dosimetry Center; first MSC Chairman of Portsmouth's Radiology Dept; designed Radiology Department spaces for new Portsmouth hospital; wrote the equipment procurement specifications; and performed initial design of the first DoD DIN-PACS system. Tours include: USS Fulton, USS Samuel Gompers; AFRRI, 1981-1983; OST, 1983-1986; Radiation Safety Department, National Naval Medical Center, Bethesda, 1986-1990; Naval Hospital Portsmouth, 1990-1997; Chief of Naval Operations, N-455 Office, 1997-present.
- 1978 L. J. McKenzie B. S. Chemistry. USS FULTON, 1980-1983.
- 1979 Mel Ely M. S. Radiation Biology. Prior nuclear medicine technician at Naval Hospital Bethesda, 1969 time frame. Got out of the Navy, completed under-graduate and graduate training and came back into the Navy. Tours include: AFRRI, 1979; USS FRANK CABLE 1982; Naval Undersea Medical Institute, New London, 1985-1988; Chief of Naval Operations, OP-45 1988-1991; and Defense Nuclear Agency, 1991-present.
- 1979 Jon L. Hopkins M. S. Radiation Health. First Afro-american radiation health officer. Tours include: USS SPERRY, 1979-1981; Naval Submarine Base, Pearl Harbor, 1981-1985; OST, University of Pittsburg (two program completed in one year), 1985-1986; Naval Undersea Medical Institute, New London, 1986-1988. Accepted to medical school, George Washington University. Now completing internship at Naval Hospital Portsmouth.
- 1979 R. L. Renne M. S. Radiation Physics. Tour at Naval Hospital Philadelphia, 1979.
- 1979 Walt M. Snesko M. S. Biological Science. Tour at Naval Environmental Health Center, Norfolk, 1979-1983; USS HUNLEY, 1983.
- 1979 M. T. Ricciardi B. S. Chemistry. Completed tour on USS EMORY S. LAND, 1979-1981.

- 1979 K. P. Ferlic M. S. Physics. AFRRI, 1979-1982.
- 1980 J. D. Campbell M. S. Radiological Science, Purdue. Tours include: Naval Undersea Medical Institute, New London, 1983-1986; OST, Purdue; Naval Hospital Bremerton; Navy Environmental Health Center, Norfolk. Retired 1994. Now at PANTEX Plant in Amarillo, Texas.
- 1980 Robert S. Thompson PhD Physiology. Tours include: NMRI (physiology sub-specialty); USS L. Y. SPEAR; Naval Shipyard Charleston, Naval Hospital Portsmouth; Director, Naval Weapons Radiological Controls Program; 1989-1995; Uniformed Services University of Health Sciences, 1995-present.
- 1980 Kim Working Certified Radiation Therapy Physicist. Line transfer from aviation program. Tours include: USS SIMON LAKE, 1979-1982; Naval Hospital Bethesda, 1982-1984; OST, Georgetown, 1984-1985; Naval Hospital Oakland 1985-1988. Now a Medical Physicist practicing in Nashville Tennessee.
- 1980 G. E. Blackshire M.S. Radiation Health University of Florida. Prior nuclear medicine technician at Naval Hospital Bethesda. Tours include: USS YELLOWSTONE, Naval Hospital Jacksonville, 1982-1985; OST, University of Florida, 1985-1987; Naval Hospital Pensacola, 1987-1988.
- 1980 T. J. Hatten B. S. Chemistry. USS HUNLEY, 1980-1983.
- 1980 T. W. Olin B. S. Chemistry. Naval Hospital Portsmouth, 1980.
- 1980 R. V. Yale B. S. Biological Science, RASO, Port Hueneme, 1980.
- 1981 Dean Taylor M. S. Radiation Health. Ex-Line Officer. Tours include: Naval Hospital Jacksonville, 1985-1989; OST, University of Washington, 1989-1991; Naval Hospital San Diego, 1991-1993. Retired 1993, now radiation physicist in Terre Haute Indiana.
- 1981 Dave Misco Certified Radiation Therapy Physicist. Tours include: USS ORION, La Madalena, IT, 1981-1984; Naval Hospital Bethesda, 1984-1987; OST, University of Wisconsin, 1987-1989; Naval Hospital San Diego, 1989-1993. Now practicing medical physics in San Diego and serving in the Marine Corps Reserves.

- 1981 Tom Mohaupt Certified Health Physicist. Transferred into the Medical Service Corps from the aviation community. Tours include: USS DIXON, 1981-1984; AFRRI, 1984-1988; Naval Hospital Great Lakes, 1988-1991. Now Hospital Radiation Safety Officer at Wright State University, Dayton, Ohio.
- 1981 Mike Coogan M. S. Biological Science. Tours include: NMRI, 1981-1984; Radiation Safety Department, National Naval Medical Center, Bethesda, 1984-1988. Transferred to the Army radiation health program. Retired. Now Radiation Safety Officer for Defense Logistics Agency.
- 1981 Steve Doremus PhD, Radiological Physics. With LCDR Higgins developed fade algorithm for DT-648 TLD and first fade lithium fluoride correction for neutron irradiation. Ex-corpsman, surgical service. Tours include: USS HOLLAND, Holy Loch, 1981-1983; Naval Submarine Base New London, 1983-1986; OST Purdue, 1986-1989; Naval Dosimetry Center, Bethesda, 1989-1993; Naval Shipyard Portsmouth, 1993-present.
- 1981 V. L. Hibbs B.S. Psychology. USS PUGET SOUND, 1981-1985; Naval Hospital Orlando, 1985.
- 1981 Garry Higgins M.S. Radiological Physics. Ex-submarine Corpsman, USS BATFISH. Tours include: USS ACADIA, 1981- ; Uniformed Services University of Health Sciences, 1984-1985; Naval Hospital and Naval Nuclear Power School, Orlando, 1985-1988; OST, University of Florida, 1988-1990; Naval Dosimetry Center, Bethesda, 1990-1993 (detailed July 93-February 94 to National Naval Medical Center as the Radiation Safety Officer); OP-45, 1994-1995; Armed Forces Medical Intelligence Center, 1995-present.
- 1981 Julian Manders M. S. Radiation Physics. Designed Radiation Therapy spaces for new Naval Medical Center Portsmouth. Tours include: RASO, Port Hueneme, 1981-1985; Naval Hospital Great Lakes 1985-1988; Naval Hospital Oakland, 1988-1990; Naval Hospital Portsmouth, 1990-present.
- 1981 Joe Shammus M.S. Biological Science; MBA Business. Lebanese orphan. Older brother emigrated to U.S., later went back to Lebanon, found his five brothers and sisters and brought them to U.S. Joe enlisted in the Navy. Was a Corpsman at Naval Hospital Bethesda assigned to the Ward where Admiral Rickover happened to be a patient. Admiral Rickover recruited him into the submarine force. Qualified submarine corpsman on Fleet Ballistic Submarines. Commissioned in 1981. Tours include: USS MCKEE, 1981-1984; Naval Medical

Clinic Pearl Harbor, 1984-1987. Transferred to Health Care and Administration sub-specialty. Retired 1995.

- 1981 Bill Travis M.S. Radiation Sciences. Tours include: Naval Hospital Bremerton, 1981-1984; Naval Medical Institute, Bethesda, 1984. Transferred to Health Care and Administration sub-specialty.

- 1981 B. L. Francis B. S. Education. USS CANOPUS, 1981.

- 1981 K. T. Seufert B. S. Biology. USS EMORY S. LAND, 1981-1984.

- 1981 G. N. Poteat Tour on USS SAMUAL GOMPERS.

- 1982 Dave Farrand M. S. Biological Science; M. S. Radiological Science. Tours include: Damage Control Training Center, Treasure Island, 1982-1985; OST Training, San Jose State, 1985-1987; Charleston Naval Shipyard, 1987-1990; Marine Corps Headquarters, 1990-1994; Officer in Charge, Radiological Affairs Support Office, Yorktown, 1994.

- 1982 Alex Grasso M.S. Biology. Transferred from the Line aviation community. Tours include: USS FULTON, 1982- 1984; Naval Hospital San Diego, 1984-1986; Naval Submarine Base, New London, 1986-1989; Naval Hospital Charleston, 1989-1992; NAVSEA O6GN, Nuclear Weapons Radiological Control Program, 1992.

- 1982 Mary Jo Ramsey M.S. Radiation Physics. Ex-corpsman, independent duty corpsman. Tours include: USS CAPE COD, 1982- ; Radiological Support Office, Yorktown, 1982-1985; OST San Diego State, 1985-1987; Naval Hospital San Diego, 1987-1990; Naval Hospital Oakland, 1990-present.

- 1982 Shawn O'Toole M.S. Radiological Science. Tours include: USS SIMON LAKE, 1982-1985; Trident refit facility, Bangor, 1985-1988; OST, University of Washington, 1988-1990; Naval Shipyard Portsmouth, 1990-1993; Radiological Affairs Support Office, Yorktown, 1993-present.

- 1982 T. J. Gilbert B.S. Psychology. Naval Hospital Great Lakes.

- 1982 D. M. Judge B.S. Chemical Engineering. USS YELLOWSTONE, 1982-1985.

- 1982 T. W. Olin B. S. Chemistry. Naval hospital Portsmouth, 1982.

- 1983 Greg M. Gorsuch M. S. Zoology, LASER Safety Specialist. Tours include: USS PROTEUS, Guam, 1983-1984; Naval hospital Pensacola, 1984-1987; National Naval Medical Center, Bethesda, 1987-1990; Naval Hospital Oakland, 1990-1993; Headquarters, Marine Corps, 1993-present.
- 1983 M. H. Griffith B.S. Physical Science. Nation Naval Medical Center, 1983-1985.
- 1983 C. E. Howze B.S. Biology. USS PUGET SOUND, 1983-1986; Naval Hospital Portsmouth, 1986-1988. Changed sub-specialty to Health Care Administration.
- 1983 M. F. Stanford PhD Biophysics. Naval Aerospace Medical Research Institute, Pensacola, 1983-1986. Left the Navy to enter astronaut program.
- 1983 G. S. Croft B. A. Chemistry. USS EMORY S. LAND, 1983-1986.
- 1983 C. E. Howze B. S. Biology. Ex-submarine corpsman. USS PUGET SOUND. Changed sub-specialty to Health Care Administration.
- 1983 D. J. Dunn B. S. Biology. Prior Army. Tours include: USS GOMPERS, 1983-198 ; Naval Technical Training Center, Treasure Island, 1985-1988; Naval Hospital San Diego, 1988-1992; OST, San Diego State, 1992-1993; Naval Hospital Bremerton, 1993.
- 1983 Ray K. S. Fong M. S. Radiological Science. Certified in Health Physics. Tours include: USS SHENANDOAH, 1983-1985; Naval Submarine Base Pearl Harbor, 1985-1989; Naval Hospital Great Lakes, 1989-1993; Radiation Safety Officer, Naval Medical Center San Diego, 1993-present.
- 1983 Greg Harris M. A. Biology. Prior high school teacher. Tours include: USS CAPE COD, 1983-1986; Naval Hospital Groton, 1986-1990; OST, Colorado State University, 1991-1994; Navy Environmental Health Center 1994-present.
- 1983 Dave L. Martin M.S. Bioengineering. Tours include: USS HUNLEY, 1983-1986; Naval Medical Research Institute, Bethesda, 1986-1988. Inter-service transfer to the Air Force. Now a Major, supervising the radiation health program for their logistics command at Wright Patterson Air Force Base, Dayton Ohio.

- 1983 J. Pomerville B.S. Radiological and Health Sciences. Ex-corpsman, x-ray technician. Tours include: USS L. Y. SPEAR, 1983-1986; National Naval Medical Center (Naval Dosimetry Center), 1986-1989; Trident Refit Facility, Kings Bay, 1989-1992; Naval Hospital Groton, 1992-1996; Chief of Naval Operations, N-45, 1966-present.
- 1984 Arnie G. Germes B. S. Biology. Tours include: USS DIXON, 1984-1986; Naval Hospital Oakland, 1986-1988; Naval Technical Training Center, Treasure Island 1988-1990; Naval Hospital Oakland 1990-1992. Now a radiation safety officer at Veterans Administration Hospital San Francisco.
- 1984 Michael Golightly B. S. Chemistry. Naval Academy Graduate. Tour at AFRRI, 1984; USS SIMON LAKE, 1984. Now working for Naval Aeronautical Space Agency, Houston.
- 1984 Ron Long B. S. General Studies. Ex-corpsman, x-ray technician. Tours include: USS ORION 1984-1987 ; Naval Hospital San Diego, 1987-1991; Naval Hospital Naples, 1991-1994; Naval Undersea Medical Institute, 1994-present.
- 1984 T. D. Naquin B. S. Biology. Tours include: USS PROTEUS, 1984-1986; Naval Hospital Charleston, 1986-1989; Naval Undersea Medical Research Institute, New London, 1989-1993; OST, Texas Tech; Puget Sound Naval Shipyard, 1995-present.
- 1984 J. Pate B. S. Biology. Tours include: USS FULTON, New London, 1984-1986; Uniformed Services University of Health Sciences, 1986. Accepted into medical school Uniformed Services University of Health Sciences, 1987. Completed internship and now completing General Medical Officer tour.
- 1984 M. S. Reisert B. S. Biomedical Engineering. USS ACADIA, 1984-1986.
- 1984 Sandy Jo Riahi Board Certified, Radiation Health, M.S. Radiation Health and B. S. Nuclear Medicine. Ex-Air Force nuclear medicine technician. First Navy RSO to complete the Georgia Tech correspondence program for a Masters Degree in Radiation Health. Tours include: USS CANOPUS, 1984-1986; Naval Undersea Medical Institute, New London, 1986-1989; Naval Hospital Pensacola, 1989-1994; Navy Environmental Health Center, 1994-present.

- 1984 Dave Schauer PhD, Radiation Health Physics. Tours include: USS MCKEE, 1984-1986; AFRRI, 1986-1990; OST, Johns Hopkins (Thesis work was featured cover article in Health Physics Journal.), 1990-1993; Naval Dosimetry Center, Bethesda, 1993-present.
- 1985 P. L. Healy B. S. Mechanical Engineering. USS SIMON LAKE.
- 1985 Phil Liotta B. S. Chemistry. Ex-corpsman. Tours include: USS EMORY S. LAND, 1985-1987; Naval Medical Clinic, Pearl Harbor, 1985-1986; National Naval Medical Center (Radiation Safety Department/Dosimetry Center) 1986-1990; Naval Hospital Jacksonville, 1990-1994; OST, 1994.
- 1985 Rev O. Williams M.S. Radiological Physics, B.S. Medical Chemistry. Tours include: USS SHENANDOAH, 1985-1987; Naval Hospital Portsmouth, 1987-1991; OST University of Florida, Gainesville, 1991-1993; Naval Hospital San Diego, 1993.
- 1985 Mike Woolbart B.S. Biology. Tours include: USS HOLLAND, 1985-1987; National Naval Medical Center, Bethesda, 1987-1988. Now working in radiation safety department of the Uniformed University of Health Sciences, Bethesda.
- 1985 V. Deinnocentiis B. S. Radiologic Technology. Ex-corpsman, x-ray technician. Tours include: USS YELLOWSTONE, 1985-1988; Radiological Affairs Support Office, Yorktown, 1988-1991; OST, University of Lowell, 1991-1993; Naval Undersea Medical Institute, New London, 1993.
- 1986 C. H. Booker B. S. Nuclear Medicine Technology. Tours include: USS GOMPERS, 1986-1988; Trident Refit Facility.
- 1986 B. K. Glennon M.A. Radiological Physics, Certified in Diagnostic Radiological Physics. Speaks seven languages. Deployed on USNS Comfort during Desert Storm. Tours include: USS HUNLEY, 1986-1988; National Naval Medical Center, Bethesda, 1988-1991; OST University of Wisconsin, 1991-1993; Naval Hospital San Diego, 1993.
- 1986 M. L. Reynolds B.S. Biology. Tour on USS L. Y. SPEAR.
- 1986 J. E. Strickland B.A. Biology. Tours include: USS PUGET SOUND, 1986-1989. Changed sub-specialty to aviation physiology.

- 1986 Eric Wittenback B.S. Chemistry. Tours include: USS ACADIA, 1986-1988; Naval Submarine Base, Pearl Harbor, 1988-1991; Naval Hospital Charleston, 1993.
- 1986 Mike A. Riley B.S. Radiation Health. Tours include: USS ORION, 1986-1988; Naval Submarine Base New London, 1988-1991; Naval Shipyard Charleston, 1991-1994; OST, 1994; Naval Hospital Portsmouth.
- 1986 Rick Van Way B.S. Biology. Tours include: USS CANOPUS, 1986-1988; Naval Medical Clinic, Pearl Harbor, 1988-1991; Naval Hospital San Diego, 1991-1995; Naval Hospital Okinawa, 1995-present.
- 1986 Ken Rider B.S. Biochemistry. Tours include: USS CAPE COD, 1986-1988; NMRI, 1988-1990.
- 1986 Tom Bogar B.S. Physics. Tours include: USS PROTEUS, 1986-1988; Trident Refit Facility Bangor, 1988-1989. Left the Navy for Law School, Philadelphia. Now practicing Law in Philadelphia.
- 1986 Kevin Bolds B.S. Biology. Tours include: USS MCKEE, 1986-1988; Naval Hospital Orlando, 1988-1991; Naval Dosimetry Center, Bethesda, 1991-present.
- 1986 John H. Padgett B.S. Biology. Tours include: USS DIXON, 1986-1988;
- 1986 J. J. King B. S. Biology, M.S. Health Physics; M.S. Science Education; Naval War College (Off Campus Program). Deployed on USNS MERCY for Desert Storm. Tours include: USS FULTON, 1986-1989; Naval Aerospace Medical Research Laboratory, 1989-1992; USNS MERCY, 1991-92; OST, University of Michigan, 1992-1994; Naval Dosimetry Center, 1994-present.
- 1986 Sara K. Kirtland PhD Microbiology. Transferred from Molecularbiology to Radiation Health sub-specialty. First female in the Medical Service Corps to achieve Surface Warfare qualification as a Medical Service Corps Officer (there have been one or two other female officers who completed Surface Warfare qualification as Line Officers and then transferred into the Medical Service Corps). Tours include: NMRI, 1985-1987; USS HOLLAND, 1986-1988; National Naval Medical Center, (deployed 4 months TAD to USS SAMUAL GOMPERS, Bahrain), 1988-1992; Naval Hospital Portsmouth, 1992-present.

- 1986 Ken Kerns M.A. Physiology. First Radiation Health Officer to achieve Surface Warfare Qualification. Tours include: USS FRANK CABLE, 1986-1988; AFRRI, 1988-1989. Left the Navy to work with EG&G in Albuquerque, NM.
- 1986 Debbie J. Shumaker M.S. Biomedical Engineering. Tours include: AFRRI, 1986-1988; USS SHENANDOAH, 1988-1990; Naval Hospital Portsmouth, 1990-1993.
- 1986 Sharon Beuregard- Thompson M.S. Medical Physics; B.S. Biochemistry; Two years medical school at USUHS. Transferred into radiation health program from medical school. (Married name, Sharon Thompson, husband Aerospace Medical Officer with Marine Corps.) Tours include: National Naval Medical Center, 1986-1988; USS MCKEE, 1988-1990; Naval Hospital San Diego, 1990-1992. Now practicing medical physics in San Diego area.
- 1986 Anthony F. Artero B.S. Biology. Tours include: USS SIMON LAKE, 1986-1989. Changed sub-specialty to Aviation Physiology.
- 1986 Berry Craig B.S. Biology. Ex-submarine corpsman. Tours include: USS L. Y. SPEAR, 1987-1989; Trident Refit Facility, Bangor, 1989-1991. Changed sub-specialty to Health Care Administration.
- 1988 Michell Ferchak- Loscocco M.S. Radiological Physics. Board Certified Diagnostic Medical Physics. NROTC graduate, requested MSC commission. Tours include: USS CAPE COD, 1988-1990; OST, University of Virginia, 1990-1992; National Naval Medical Center.
- 1988 Dave Murphy B.S. Psychology/Pre-Med. Admitted into medical school, USUHS, asked for delay so he could have an operational tour, commissioned into MSC as radiation health officer. Tours include: USS EMORY S. LAND, 1987-1990. Re-admitted into medical school, Uniformed Services University of Health Sciences. Now Navy physician at Great Lakes.
- 1988 Joanne Wadkins B.S. Physics. Tours include: USS ORION, 1988-1991.
- 1988 James W. Elliot B.S. Biology. Tours include: USS YELLOWSTONE, 1988-1991; Naval Hospital Orlando, Naval Nuclear Power School, 1991-1993; now in medical school.
- 1988 Lino Fragoso PhD Genetics. Tours include: AFRRI 1988-1991; USS ORION, 1991-1993; Radiological Support Office 1993-present.

- 1989 William J. Adams PhD Pathology/Toxicology. Transferred to Radiation Health sub-specialty from Biochemistry, wanted operational experience. First Radiation Health Officer to be appointed Director of Radiation Health at Puget Sound Naval Shipyard. Tours include: AFRRI, (Biochemistry) 1983-1989; USS FULTON, 1989-1991; Puget Sound Naval Shipyard, 1991-1995; Director Radiation Health, Pearl Harbor Naval Shipyard, 1995-present.
- 1988 Lavan Gaiter M.S. Chemical Engineering. Transferred from Civil Engineering Corps to Medical Service Corps. Tours include: USS SIMON LAKE, 1988-1990; AFRRI, 1990-1993; Naval Medical Research Institute, 1993-present.
- 1988 Mike Carpenter M.S. Physical Chemistry. Tours include: USS HOLLAND, 1988-1991.
- 1988 Danny Simpson B.S. Biology. Ex-corpsman, recruited by Bill Travis. Tours include: USS HUNLEY, 1988-1990; Radiological Affairs Support Office, 1990-1993; Out Service Training 1994-present.
- 1988 Bruce Holland B.S. Chemistry. Tours include: USS CANOPUS, 1988-1990; Naval Medical Research Institute, 1990-1993; AFRRI 1993-1995.
- 1989 Russ Hendershot B.S. Biology. Tours include: USS DIXON, 1988-1991. Accepted into medical school, Philadelphia.
- 1989 Terri Jones B.S. Biomedical Engineering. Tours included: USS ACADIA, 1989-1991 (deployed to Bahrain during Desert Storm); Naval Hospital Oakland, 1991-1993; Naval Hospital Naples 1993-present.
- 1989 Elise Batteiger B.S. Biology. Tour included: USS SAMUAL GOMPERS, 1989-1992.
- 1989 Matt Humperville B.S. Environmental Health. Tours include: USS FRANK CABLE, 1989-1991; Naval Submarine Base, 1991-1993. Changed sub-specialty to industrial hygiene.
- 1989 Pam Turner-Featherston. M.S. Biology. Tours include USS L. Y. SPEAR, 1989-1991; Naval Hospital Portsmouth, 1991-1994; OST, 1994.

- 1990 Mary Fehr-Creswell. M.S. Radiological Physics; M.S. Nuclear Engineering. Tours include: Naval Hospital San Diego, 1990-1992; USS MCKEE, 1992-1996; Naval Submarine Base Pearl Harbor, 1996.
- 1990 Jerry Alexandraios M.S. Physical Chemistry. Tour on USS ORION, 1990-1992.
- 1990 Cynthia Boulanger B.S. Microbiology. Transferred to MSC from medical school, USUHS. Tours include: USS MCKEE, 1990-1992; Naval Hospital San Diego, 1992-1995. Now practicing medical physicist in San Diego.
- 1989 David Hinkley B.S. Biology. Tours include: USS EMORY S. LAND, 1989-1991; National Naval Medical Center, 1991-1995; OST 1995-present.
- 1990 Dwayne Jones B.S. Physical Chemistry. Tour at Naval Dosimetry, 1990-1993. Now working for U.S. Patent Office, Washington D.C.
- 1990 Steve Foster B.S. Biology. Ex-corpsman, nuclear medicine technician, submarine corpsman. Tours include: Submarine Base, Kings Bay, 1990-1993; Naval Hospital San Diego, 1993-1995; Naval Hospital Bremerton, 1995-present.
- 1990 John Crapo B.S. Radiation Health. Ex-submarine ELT. Tour at AFRRI, 1990-1993; Charleston Naval Shipyard 1993-1995, directed general radioactive material clean-up for BRAC Closure.
- 1990 Donna Davis B.S. Biology. Tours include: USS CAPE COD, 1990-1992; Naval Medical Clinic, Pearl Harbor, 1992-1995; OST. 1995-present.
- 1990 Vincent Hill B.S. Chemistry. Tours include: USS PUGET SOUND, 1990-1992; Trident Refit Facility, Kings Bay, 1992-1996; Naval Sea Systems Command, 1996-present.
- 1990 Luis Buenovidas M.S. Radiation Health. Transferred from the Line (minesweeper in Persian Gulf). Tours include: AFRRI, 1990-1995; Naval Medical Clinic Pearl Harbor, 1995-present.
- 1990 Shiela Hecht B.S. Biology. Ex-corpsman, nuclear medicine technician, recruited by Alex Grasso. Tours include: USS SIMON LAKE, 1990-1992; Naval Aerospace Medical Research Institute, Pensacola, 1992-present.

- 1990 John Boren B.S. Physics. Tours include: USS PROTEUS, 1990-1992; Naval Submarine Base, Pearl Harbor, 1992-1996; USS MCKEE, 1996-present.
- 1991 Frank Barby MBA, Business; B.S. General Sciences. Ex-submarine independent duty corpsman. Tours include: Squadron 20, Kings Bay, 1991-1994; Naval Hospital Jacksonville, 1994-present.
- 1991 Rebecca Sine B.S. Physics. Tours include: USS CANOPUS, 1991-1992; National Naval Medical Center, 1992-present, installed radiology telemetry system on USS GEORGE WASHINGTON.
- 1991 Tracy Brown B.S. Biology. Tours include: USS FRANK CABLE, 1991-1992. Accepted to medical 1992, Uniformed Services University of Health Sciences.
- 1991 Charles Woodruff B.S. Biology. Ex-submariner. Tours include: USS DIXON, 1991-1993, AFRRI, 1993.
- 1991 Ulime Godspell B.S. Physics. Tours include: USS YELLOWSTONE, 1991-1993.
- 1991 Jesse Aldridge B.S. Chemistry. Ex-submariner, ELT. Tours include: USS HUNLEY, 1991-1992; Uniformed University of Health Sciences, 1992-present.
- 1991 Richard Devore B.S. General Sciences. Ex-submarine independent duty hospital corpsman. Tours include: Trident Refit Facility, Bangor, 1991-1993; Naval Hospital Great Lakes, 1993-present.
- 1991 Heidi Atwood B.S. Biology. First RHO at radiography school at Orlando. Tours include: USS SHENANDOAH, 1991-1993; Naval Technical Training Center, Orlando, 1993.
- 1991 Earl Frantz B.S. Biology-Chemistry. Tours include: USS ACADIA, 1991-1992; Submarine Base, Kings Bay, 1992-1994. Left the Navy for medical School.
- 1991 L. Combs-Walker PhD Chemistry. Prior Navy dental technician, left the Navy, completed education and returned. Tours include: USS ACADIA, 1991-1993; Naval Hospital Portsmouth, 1993. Changed sub-specialty to Industrial Hygiene.

- 1991 Bryan Latham B.S. Biology. Prior Line. Tours include: USS SAMUAL GOMPERS, 1991-1993.
- 1992 Tracy Crawshaw B.S. Nuclear Medicine Technology. Tours include: USS SIMON LAKE, 1992-1993; USS SHENANDOAH, 1993-1995; Naval Under Sea Medical Institute, Groton.
- 1992 Tim Ziemba B.S. Physics. Tours include: USS HOLLAND, Guam, 1992-1993; Trident Refit Facility, Bangor.
- 1992 Brian Pomije B.S. Biology. Ex-Naval reserve Petty Officer. Tours include: USS CAPE COD, 1992-1993; Naval Hospital Portsmouth, 1993-present.
- 1992 Harvy Wildes B.S. Biology. Tours include: USS EMORY S. LAND, 1992-1993. Accepted into medical school, USUHS, 1993.
- 1992 Philip Sarap B.S. Physics. Tours include: USS PUGET SOUND, 1992-1993. Transferred to Line Officer Commission.
- 1992 Tuan Nguyen M.S. Mathematics. Father was a LCDR in South Vietnamese Navy, imprisoned for 5 years after the war while family survived on their own. Escaped at night with family on small sail boat into South China Sea, to refugee camp in Cambodia, later as refugee to San Francisco. Tuan, the oldest, worked way through school receiving a masters degree in mathematics. Tours include: USS FRANK CABLE, 1992-1993.
- 1992 Eugene Swilley B.S. Biology. Tours include: USS CANAPUS, 1993.
- 1992 Robert Takesuye B.S. Oceanography, Naval Academy, 1992. Tours include: USS DIXON, 1993.
- 1992 Jerry Sanders B.S. Physics. Tours include: USS SIMON LAKE, La Madalena, 1993-1995; AFRRI, 1995-present.
- 1993 Greg Cameron B.S. Radiologic Technology. Tours include: USS HUNLEY, 1993.
- 1993 Lisa Kennemur B.S. Biology. Tours include: USS L. Y. SPEAR, 1993-1995; National Naval Medical Center, 1995-present.

- 1993 Paul Emanuel B.S. Chemistry. Tours include: Armed Forces Radiobiology Research Institute, 1993.
- 1993 Don Delory M.S. Physics. Tours include: USS EMORY S. LAND, 1993-1995; Naval Submarine Support Facility, New London, 1995-present.
- 1994 Paul Sanford B.S. Biology. Tours include: USS CAPE COD 1994
- 1994 Kenneth D. Smith B.S. Nuclear Medicine Technology. Tours include: USS HOLLAND, 1994.
- 1994 Shannon Voss B.S. Radiation Health. Previous radiation control technician, Puget Sound Naval Shipyard. Tours include: USS SAMUEL GOMPERS, 1994
- 1994 George Younes B.A. Mathematics. Previous Air Force Technician. Tours include: USS SHENANDOAH, 1994.
- 1994 Eugene Jackson B.A. Chemistry. Previous Navy nuclear medicine instructor. Tours include: USS CAPE COD, 1994.
- 1995 Theresa Pepe M.S. Bio-medical Science. Tours include: USS SIMON LAKE, 1995.
- 1995 Ralph Marro M.S. Radiation Health. Previous Navy Pharmacy Technician. Tours include: Naval Dosimetry Center, 1995.
- 1995 Sean Judge B.S. Physics. Tours include: USS EMORY S. LAND, 1995.